



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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February 24, 2022

Mark Gustafson
Franke Tobey Jones
5340 North Bristol Street
Tacoma, WA 98407
mgustafson@franketobeyjones.com

Re: No Further Action at a Property associated with the Asarco Tacoma Smelter Site:

- **Name:** Franke Tobey Jones
- **Property Address:** 5340 North Bristol Street, Tacoma WA, 98407
- **Facility/Site ID:** 9163
- **Cleanup Site ID:** 13274
- **VCP Project No.:** SW1592

Dear Mark Gustafson:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of a Property associated with the Asarco Tacoma Smelter Site (Asarco Site). This letter provides our opinion. We are providing this opinion under the authority of the [Model Toxics Control Act \(MTCA\)](#),¹ [chapter 70A.305 Revised Code of Washington \(RCW\)](#).²

Issues Presented and Opinion

Ecology has determined that no further remedial action is necessary at the Property to clean up contamination associated with the Asarco Site.

This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Ecology has determined that further remedial action is still necessary elsewhere at the Asarco Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70A.305 RCW, and its implementing regulations, Washington Administrative Code ([WAC](#)) [chapter 173-340](#)³ (collectively “substantive requirements of MTCA”). The analysis is provided below.

¹ <https://apps.ecology.wa.gov/publications/SummaryPages/9406.html>

² <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305>

³ <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340>

Description of the Property and the Asarco Site

This opinion applies only to the Property and the Asarco Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.

1. Description of the Property.

The Property includes the following tax parcels in Pierce County that were affected by the Asarco Site and addressed by your cleanup:

- 6930000413.
- 6930000393.
- 6930000381.

Enclosure A includes a legal description of the Property and details of the Property as currently known to Ecology.

2. Description of the Asarco Site.

The Asarco Site is defined by the nature and extent of contamination associated with the following releases:

- Arsenic into the Soil.
- Lead into the Soil.

Those releases have affected more than one parcel of real property, including the parcels identified above.

Enclosure B includes a detailed description and diagram of the Asarco Site, as currently known to Ecology.

3. Identification of Other Sites that may affect the Property.

A parcel of real property can be affected by multiple sites. At this time, we have no information that the Property is affected by other sites.

Basis for the Opinion

This opinion is based on the information in the documents listed in **Enclosure C**. You can request these documents by filing a [records request](#).⁴ For help making a request, contact the [Public Records Officer](#)⁵ at or call (360) 407-6040. Before making a request, check whether the documents are available on [Ecology's Cleanup Site Search web page](#).⁶

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

1. Cleanup of the Property located within the Asarco Site.

Ecology has concluded that no further remedial action is necessary at the Property to clean up contamination associated with the Asarco Site. That conclusion is based on the following analysis:

a. Characterization of the Asarco Site.

The Site is described in **Enclosure B**.

Franke Tobey Jones (FTJ) proposed to expand its existing retirement facilities, which included three large buildings, 11 duplexes, and various support structures. FTJ Property (Property) is located in north Tacoma, Washington on three Pierce County parcels, encompassing 18.13 acres. Over the course of 80 years, FTJ added 14 structures to the original building, originally constructed in 1924. Each addition involved soil movement and grading. Eastern and southern parts of the Property received large quantities of fill.



Figure 1. Vicinity Map

FTJ proposed to redevelop this Property in two phases. This opinion letter pertains to Phase I of the redevelopment and to the parcels identified on page 2 of this opinion letter. A portion of parcel 0221232025 has been remediated, but it is not addressed in this opinion letter. It will be addressed after the completion of Phase II construction and remediation of the entire parcel 0221232025 (Figure 4).

⁴ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

⁵ publicrecordsofficer@ecy.wa.gov

⁶ <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=13274>

This Property is located within the Ruston Study Area, managed by the Environmental Protection Agency (EPA). In 2005, EPA sampled and analyzed the soil on the Property for arsenic and lead. They consequently conducted remedial actions in areas where arsenic and lead concentrations were above the EPA action levels of 230 milligrams per kilogram (mg/kg) for arsenic and 500 mg/kg for lead, respectively (Figure 2).

2005 Characterization Sampling by EPA

EPA collected soil samples from four depth intervals below ground surface (bgs). They collected samples from 0 to 1 inches bgs, 1 to 6 inches bgs, 6 to 12 inches bgs, and 12 to 18 inches bgs. EPA divided the Property into 13 decision units (DUs) and collected 592 samples in 148 locations (Figure 2). **Enclosure D** includes the comprehensive result of the 2005 characterization sampling.

EPA conducted cleanup action in 10 of the subunits where arsenic or lead exceeded their respective action levels. Following the cleanup action, EPA collected confirmational soil samples. EPA collected 10 discrete soil samples from 10 locations (one from each remediated subunit). Tables 1 and 2 and Figure 2 summarize the results of the characterization sampling merged with the results of the confirmational sampling in remediated areas.

The initial characterization data in the 10 remediated subunits was replaced with the confirmational sampling to illustrate the final concentrations of arsenic and lead on the Property. Table 1 summarizes the concentrations of arsenic and lead on the entire Property, while Table 2 shows the average arsenic and lead concentrations in each unit.

The 2005 sampling methodology differs from the current sampling methodology outlined in the [Tacoma Smelter Plume Model Remedies Guidance](#)⁷ (MR Guidance). The 2005 samples were collected from 0 to 1 inches bgs and from 1 to 6 inches bgs while the MR Guidance instructs taking samples at 0 to 6 inches bgs. Ecology calculated weighted averages of the 2005 samples to determine the concentrations within the 0 to 6 inches bgs depth interval, to meet requirements of the MR Guidance.

Table 1. Summary of the 2005 Soil Characterization Sampling on the Property

| Depth (inches) | Average | Arsenic (mg/kg) | | Average | Lead (mg/kg) | |
|----------------|---------|-----------------|--------------|---------|--------------|--------------|
| | | Min | Max | | Min | Max |
| 0-6 | 37.9 | 11 | 132.7 | 66.5 | 18.3 | 252.2 |
| 6-12 | 35.6 | 11 | 111 | 55.5 | 15 | 211 |
| 12-18 | 29.8 | 11 | 103 | 46.4 | 8 | 142 |
| MTCA | 20 | | 40 | 250 | | 500 |

Values in **bold** represent concentrations above the MTCA Method A cleanup level for unrestricted land use. Values in **bold red** represent concentrations twice the cleanup level.

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1909101.html>

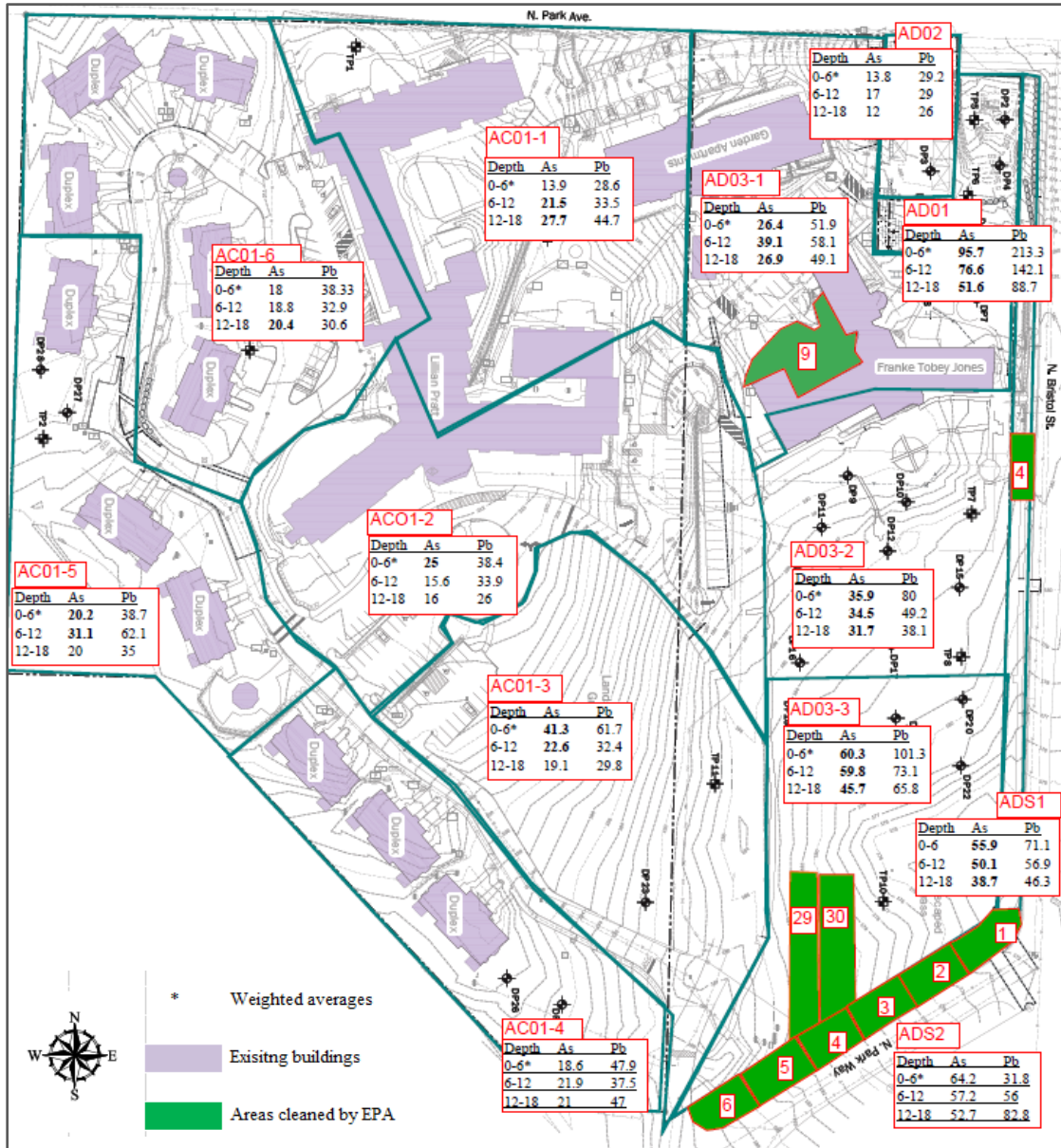


Figure 2. Summary of characterization and confirmational sampling conducted by EPA in the 13 units. The averages for each unit were calculated after the cleanup. The characterization samples were replaced by the confirmational sampling in the areas remediated by EPA.

Results of Soil Sampling using the Weighted Averages

0 to 6 inches bgs: 72 soil samples exceeded the cleanup level of 20 mg/kg for arsenic with 46 exceeding twice the cleanup level. The arsenic concentrations ranged from 11 mg/kg to 132.7 mg/kg. The average arsenic concentration was 37.9 mg/kg. One sample exceeded the cleanup level of 250 mg/kg for lead, but it did not exceed the maximum allowable concentration for a single soil sample of 500 mg/kg. Lead concentrations ranged from 18.3 mg/kg to 252.2 mg/kg. The average lead concentration was 66.5 mg/kg.

6 to 12 inches bgs: 80 soil samples exceeded the cleanup level of 20 mg/kg for arsenic with 38 exceeding twice the cleanup level. The arsenic concentrations ranged from 11 mg/kg to 111 mg/kg. The average arsenic concentration was 35.6 mg/kg. None of the lead concentrations in this depth interval exceeded the cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 15 mg/kg to 211 mg/kg. The average lead concentration was 55.5 mg/kg.

12 to 18 inches bgs: 75 soil samples exceeded the cleanup level of 20 mg/kg for arsenic with 26 exceeding twice the cleanup level. The arsenic concentrations ranged from 11 mg/kg to 103 mg/kg. The average arsenic concentration was 29.8 mg/kg. None of the lead concentrations in this depth interval exceeded the cleanup level of 250 mg/kg for lead. Lead concentrations ranged from 8 mg/kg to 142 mg/kg. The average lead concentration was 46.4 mg/kg.

Table 2. Average concentrations of arsenic and lead in each unit.

| Unit | Depth (inches) | Arsenic (mg/kg) | Lead (mg/kg) | Unit | Depth (inches) | Arsenic (mg/kg) | Lead (mg/kg) |
|--------|----------------|-----------------|--------------|--------------------------------|----------------|-----------------|--------------|
| AD03-3 | 0-6 | 60.3 | 101.3 | AC01-2 | 0-6 | 25 | 38.4 |
| AD03-3 | 6-12 | 59.8 | 73.1 | AC01-2 | 6-12 | 15.6 | 33.9 |
| AD03-3 | 12-18 | 45.7 | 65.8 | AC01-2 | 12-18 | 16 | 26 |
| AD03-1 | 0-6 | 26.4 | 51.9 | AC01-1 | 0-6 | 13.9 | 28.6 |
| AD03-1 | 6-12 | 39.1 | 58.1 | AC01-1 | 6-12 | 21.5 | 33.5 |
| AD03-1 | 12-18 | 26.9 | 49.1 | AC01-1 | 12-18 | 27.7 | 44.7 |
| AD03-2 | 0-6 | 35.9 | 80 | AD01 | 0-6 | 95.7 | 213.3 |
| AD03-2 | 6-12 | 34.5 | 49.2 | AD01 | 6-12 | 76.6 | 142.1 |
| AD03-2 | 12-18 | 31.7 | 38.1 | AD01 | 12-18 | 51.6 | 88.7 |
| AC01-6 | 0-6 | 18 | 38.33 | AD02 | 0-6 | 13.8 | 29.2 |
| AC01-6 | 6-12 | 18.8 | 32.9 | AD02 | 6-12 | 17 | 29 |
| AC01-6 | 12-18 | 20.4 | 30.6 | AD02 | 12-18 | 12 | 26 |
| AC01-5 | 0-6 | 20.2 | 38.7 | ADS1 | 0-6 | 51.5 | 63.8 |
| AC01-5 | 6-12 | 31.1 | 62.1 | ADS1 | 6-12 | 50.1 | 56.9 |
| AC01-5 | 12-18 | 20 | 35 | ADS1 | 12-18 | 38.7 | 46.3 |
| AC01-4 | 0-6 | 18.6 | 47.9 | ADS2 | 0-6 | 64.2 | 31.8 |
| AC01-4 | 6-12 | 21.9 | 37.5 | ADS2 | 6-12 | 57.2 | 56 |
| AC01-4 | 12-18 | 21 | 47 | ADS2 | 12-18 | 52.7 | 82.8 |
| AC01-3 | 0-6 | 41.3 | 61.7 | MTCA Method A Cleanup Level | | 20 | 250 |
| AC01-3 | 6-12 | 22.6 | 32.4 | | | | |
| AC01-3 | 12-18 | 19.1 | 29.8 | | | | |

Values in **bold** represent concentrations above the MTCA Method A cleanup level for unrestricted land use. Values in **bold red** represent concentrations twice the cleanup level.

2016 Supplemental Sampling by GeoEngineers

In November 2016, GeoEngineers conducted additional characterization sampling to determine the concentrations of arsenic and lead in deeper soil layers, located under the fill. They collected the samples using a test pit and direct push boring methods. The samples are identified as “TP” for test pit method and as “DP” for the direct push boring method, followed by a location number and sample depth (Figure 3).

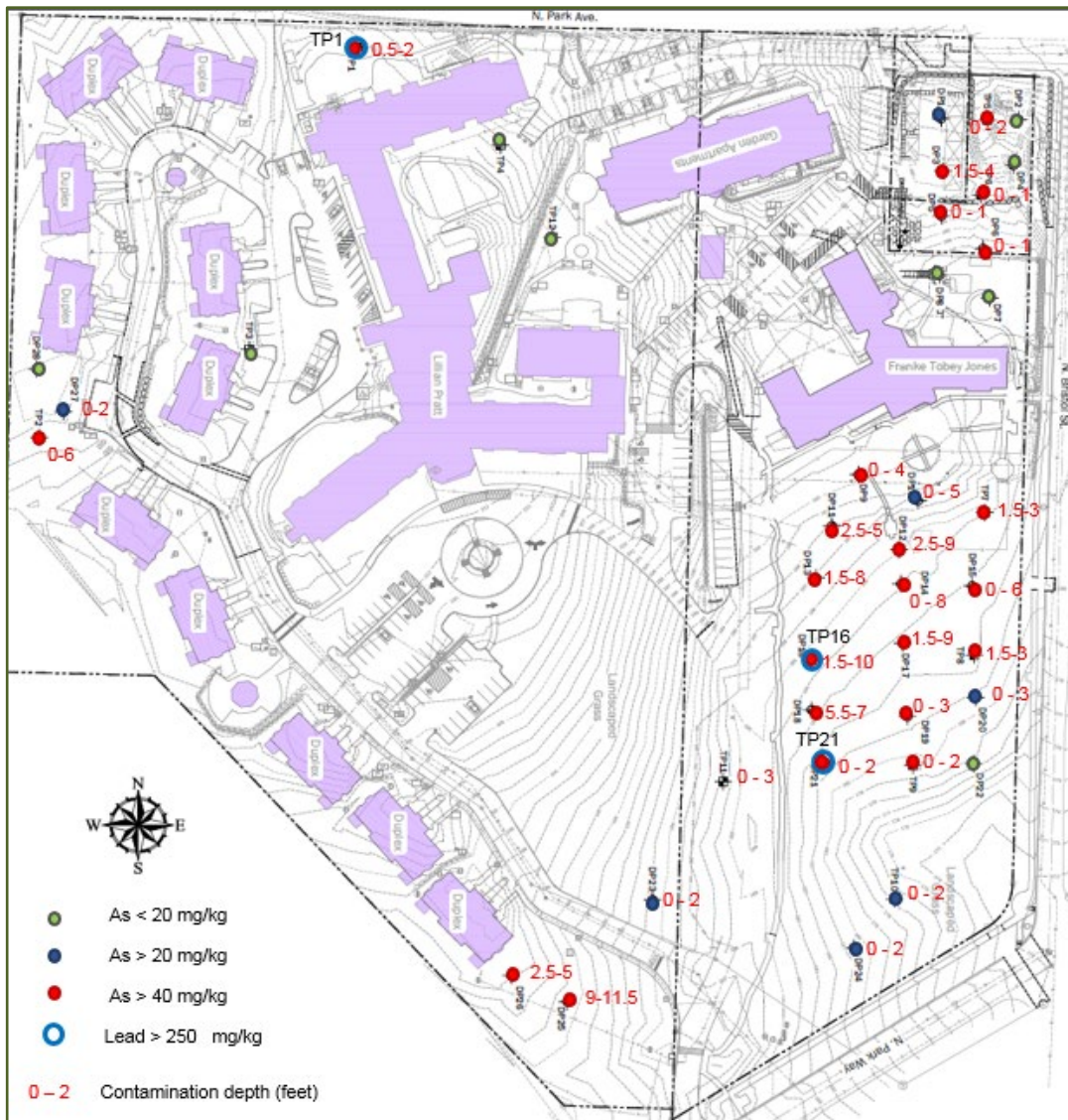


Figure 3. 2016 Characterization Sampling by GeoEngineers

GeoEngineers collected a total of 29 direct-push borings and 12 test pits. They collected the soil samples approximately up to three feet below the fill material and up to 10 feet bgs in places. GeoEngineers collected the samples at one-and-a-half-foot depth intervals at the base of each sample location. GeoEngineers submitted the samples to OnSite Environmental laboratory in Redmond, Washington for arsenic and lead analysis with EPA Method 6010.

GeoEngineers tested other potential chemicals of concern due to the debris discovered in the fill. They evaluated the soil for Volatile Organic Compounds (VOCs) with EPA Method 8260B (three samples), Resource Conservation and Recovery Act (RCRA) metals, petroleum hydrocarbons by Ecology-approved method NWTPH-HCID (eight samples). They followed with appropriate diesel- and oil-range petroleum hydrocarbons by Ecology-approved method NWTPH-Dx (two samples), Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270SIM (eight samples,) and RCRA metals by EPA Series Method 6000/7000 (eight samples).

Summary of 2016 Characterization Sampling

Tacoma Smelter Plume contamination (arsenic and lead): The average arsenic concentrations was above the cleanup level of 20 mg/kg for arsenic in all depth intervals except the 8 to 8.5 feet bgs. Sixty out of the 120 samples analyzed for arsenic were above the cleanup level for arsenic with 28 samples exceeding the maximum allowable concentration for a single soil sample of 40 mg/kg. Arsenic concentrations ranged from 2.8 mg/kg to 180 mg/kg.

Three samples analyzed for lead exceeded the MTCA Method A cleanup level of 250 mg/kg, but none exceeded the maximum allowable concentration for a single soil sample of 500 mg/kg. None of the average lead concentrations were above the cleanup level. Lead concentrations ranged from 2.7 mg/kg to 310 mg/kg. For a summary of the 2016 characterization sampling, refer to Table 3. For the comprehensive results of the characterization sampling, refer to Enclosure E.

Table 3. Summary of the 2016 Characterization Sampling

| Depth (feet bgs) | Arsenic (mg/kg) | | | Lead (mg/kg) | | |
|---------------------|-----------------|-----|------------|--------------|-----|------------|
| | Average | Min | Max | Average | Min | Max |
| 0 to 0.5 ft. bgs | 41.3 | 3.3 | 130 | 29.3 | 4.6 | 89 |
| 1 to 1.5 ft. bgs | 29.1 | 2.9 | 180 | 51.2 | 2.9 | 310 |
| 2 to 2.5 ft. bgs | 21.3 | 2.9 | 92 | 23.5 | 2.7 | 92 |
| 3 to 3.5 ft. bgs | 24.7 | 2.8 | 120 | 50.4 | 7.5 | 110 |
| 4 to 4.5 ft. bgs | 38.9 | 3.7 | 74 | 71.9 | 3.8 | 140 |
| 5 to 5.5 ft. bgs | 29.4 | 2.8 | 81 | 74.5 | 5.0 | 200 |
| 6 to 6.5 ft. bgs | 63 | 2.8 | 160 | 113 | 88 | 130 |
| 7 to 7.5 ft. bgs | 37 | 5.5 | 120 | 60 | 21 | 120 |
| 8 to 8.5 ft. bgs | 15.8 | 2.8 | 67 | 31.2 | 2.9 | 130 |
| 9 to 9.5 ft. bgs | 42.2 | 3.2 | 110 | 167.5 | 55 | 280 |
| MTCA | 20 | | 40 | 250 | | 500 |

Values in **bold** represent concentrations above the MTCA Method A cleanup level for unrestricted land use. Values in **bold red** represent concentrations twice the cleanup level.

PAHs and other metals: Soil samples collected from eight locations (DP1, DP4, DP6, DP13, DP16, DP21, DP25, and TP2) were analyzed for PAHs and metals (barium, cadmium, chromium, mercury, selenium, and silver). The metals and PAHs were either not detected or were detected at concentrations less than their respective MTCA Method A Unrestrictive Land Use (ULU) cleanup levels or Method B criteria (Enclosure E).

Petroleum hydrocarbons were analyzed in soil samples collected from eight locations (DP1, DP4, DP6, DP13, DP16, DP21, DP25, and TP2) based on the observations of a slight sheen noted during field screening. Lube oil-range petroleum hydrocarbons were identified in one soil sample collected from DP16 at 8.5 to 9 feet bgs (Enclosure E). This sample was submitted for a follow-up analysis of diesel- and lube oil-range petroleum hydrocarbons by Ecology-approved method NWTPH-Dx including the deeper sample from this boring (DP16 from 9 to 9.5 feet bgs) to evaluate the depth of potential contamination. Diesel- and lube oil-range petroleum hydrocarbons were either not detected or detected at concentrations less than their respective MTCA Method A ULU cleanup levels.

Lube oil-range petroleum hydrocarbons were detected at concentrations of 700 mg/kg from 8.5 to 9 feet bgs and 160 mg/kg from 9 to 9.5 feet bgs in boring DP16. Diesel-range petroleum hydrocarbons were detected at concentration of 90 mg/kg from 8.5 feet bgs and not detected from 9 to 9.5 feet bgs. The petroleum-impacted soil is located deeper than the proposed excavation depth during Phase I and Phase II construction.

Three soil samples collected from explorations DP13, DP16, and TP2 were analyzed for VOCs. Methylene chloride was detected at a concentration of 0.085 mg/kg, which is greater than the MTCA Method A unrestricted land use cleanup level of 0.02 mg/kg in one soil sample collected from boring DP16 at 8.5 to 9 feet bgs. Additional follow-up analysis was not completed in other samples near boring DP16 because methylene chloride is a common laboratory contaminant and QA/QC issues were noted in the laboratory report.

b. Establishment of Cleanup Standards for the Asarco Site.

Ecology has determined the cleanup levels and points of compliance established for the Asarco Site meet the substantive requirements of MTCA.

As part of the Interim Action Plan for the Asarco Site (June 2012) (IAP), Ecology completed a terrestrial ecological evaluation for properties with only Tacoma Smelter Plume contamination. Ecology determined the MTCA Method A cleanup levels for both arsenic and lead were protective of both human health and the environment.

The MTCA Method A cleanup levels for soil are as follows:

- Arsenic is 20 mg/kg.
- Lead is 250 mg/kg.

The IAP determined the following cleanup levels were protective of human health and the environment for properties within the Asarco Site:

- Average arsenic concentration detected in the soil less than 20 mg/kg.
- Average lead concentration detected in the soil less than 250 mg/kg.
- Duff composite sample is less than 20 mg/kg for arsenic.
- Duff composite sample is less than 250 mg/kg for lead.

AND

- No single soil sample has arsenic concentration above 40 mg/kg.
- No single soil sample has lead concentration above 500 mg/kg.

c. Selection of Cleanup for the Property.

Ecology has determined the cleanup selected for the Property meets the substantive requirements of MTCA and the IAP. The cleanup meets the minimum cleanup requirements and does not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Asarco Site.

Ecology proposed four model remedies in the IAP:

- Excavation and removal.
- Mixing.
- Capping in place.
- Consolidation and capping.

FTJ decided they will use all four remedies as a way to remediate the Tacoma Smelter Plume contamination on the Property. On April 14, 2017, GeoEngineers developed a Cleanup Action Plan (CAP) describing the use of the selected model remedies on the Property. On August 20 2017, Ecology issued an opinion letter on the proposed cleanup based the information provided in this CAP.

d. Cleanup of the Property.

FTJ conducted the soil cleanup at the Property in conjunction with Phase I redevelopment. GeoEngineers divided the Property into two remedial areas reflecting the phased redevelopment and cleanup actions:

Remedial Area 1 (Area 1): Area designated as a containment cell to store all the contaminated soil excavated from the Property (Figure 4). Only the top two feet in this area had elevated arsenic and lead. The contractor excavated the top two feet of contaminated soil from this area, stockpiled it on plastic, and covered it with plastic to prevent run-off. The contractor then excavated 25 feet of the deeper, non-contaminated soil to create a containment cell. The contractor stockpiled the non-contaminated soil on plastic, collected stockpile soil samples and covered it for later use as fill pending analysis of the samples. All the samples were below the cleanup levels of 20 mg/kg for arsenic and 250 mg/kg for lead (Stockpile 1). The soil was used as structural fill on the Property.

The contractor placed geotextile material at the bottom of the containment cell prior to placing the top layer of contaminated soil excavated from Area 1 back to the containment cell. The contractor built a retaining wall around Area 1 to increase its storage capacity. Following the placement of all the contaminated soil excavated from the Property into the containment cell in Area 1, the contractor constructed a type 1 cap. A type 1 cap consists of 12 inches of clean soil placed over a geotextile material. A landscaping material such as mulching or grass is typically placed on top of the clean soil. The contractor placed a layer of geotextile material and one foot of non-contaminated soil. The areas were then covered with grass or other landscaping materials.

Remedial Area 2 (Area 2): This area includes the remainder of the Property that will be developed or redeveloped. The contractor excavated the top 12 inches of soil from all the construction areas within Area 2 and consolidated it in the containment cell in Area 1. After the excavation of the contaminated soil, the contractor placed structural fill (from Stockpile 1) on top of the entire Area 2. Following the placement of fill, they excavated and stockpiled the soil within Area 2 to allow for installation of utilities and to meet the final grade for construction.

The contractor mixed the soil in stockpiles (2 through 4). GeoEngineers sampled the stockpiled soil. They reused the soil that was suitable as a structural fill and that tested below cleanup level for arsenic and lead (Stockpile 4) where needed on the Property. The soil in stockpile 2 tested above cleanup level of 20 mg/kg for arsenic. The soil in this stockpile was placed in containment cell in Area 1.

Upon the completion of soil stockpiling and mixing, the contractor placed the clean mixed soils back into excavated areas. GeoEngineers collected discrete soil samples in Area 2 to document the final arsenic and lead concentrations for inclusion in the environmental covenant. They collected 22 discrete soil samples from 0 to 6 inches bgs and three samples from 6 to 12 inches bgs (Figure 4).

The contractor capped the entire Area 2 with either hardscape where new buildings and walkways were constructed or type 1 cap in the remaining landscaped areas (Figure 4).

Samples collected at 0 to 6 inches bgs: Four of the soil samples exceeded the cleanup level of 20 mg/kg for arsenic, with one exceeding the maximum allowable concentration for a single soil sample (40 mg/kg). The concentrations of arsenic ranged from 5.4 mg/kg to 42 mg/kg. The average arsenic concentration was 13.3 mg/kg. None of the lead concentrations exceeded the cleanup level for lead. The concentrations of lead ranged from 5.4 mg/kg to 55 mg/kg. The average lead concentration was 17.4 mg/kg (Table 4).

Samples collected at 6 to 12 inches bgs: One sample exceeded the cleanup level of 20 mg/kg for arsenic, but did not exceed the maximum allowable concentration for a single soil sample (40 mg/kg). The arsenic concentrations ranged from 5.6 mg/kg to 35 mg/kg. The average arsenic concentration was 17.5 mg/kg. All the lead concentrations were below cleanup level for lead. The lead concentrations ranged from 5.6 mg/kg to 82 mg/kg. The average lead concentration was 31.1 mg/kg.

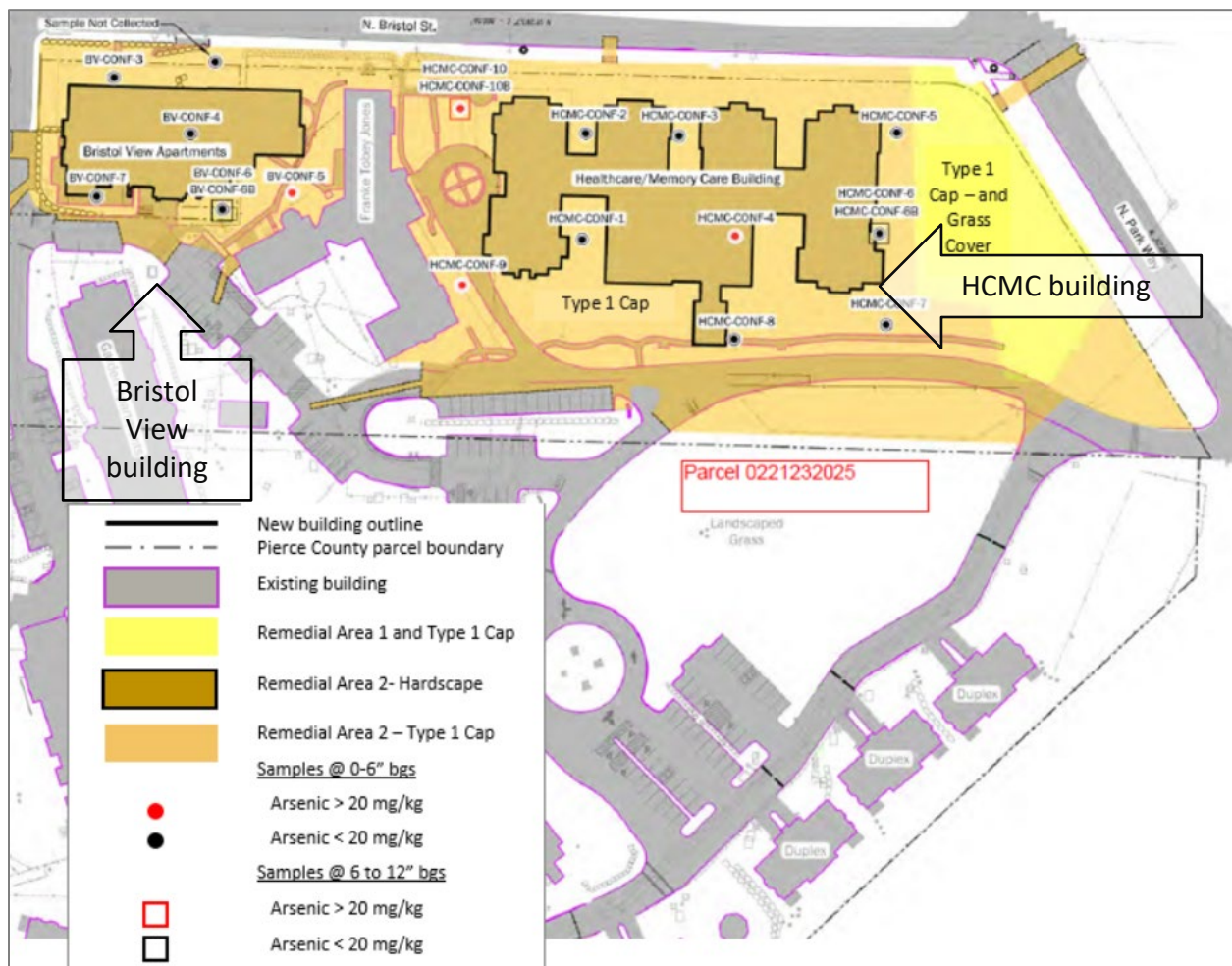


Figure 4. Phase I Remedial Areas Including Confirmational Samples

Table 4. Results of Confirmational Sampling at the Bottom of the Excavation in Area 2

| Depth (inches) | Arsenic (mg/kg) | | | Lead (mg/kg) | | |
|-------------------|-----------------|-----|-----------|--------------|-----|-----------|
| | Average | Min | Max | Average | Min | Max |
| 0-6 | 13.3 | 5.4 | 42 | 17.4 | 5.4 | 55 |
| 6-12 | 17.5 | 5.6 | 35 | 31.1 | 5.6 | 82 |
| MTCA | 20 | | 40 | 250 | | 500 |

Values in **bold** represent concentrations above the MTCA Method A cleanup level for unrestricted land use. Values in **bold red** represent concentrations twice the cleanup level.

GeoEngineers collected samples from stockpiles generated during excavating soil from Areas 1 and 2:

Stockpile 1 included soils excavated between 2 and 25 feet within Area 1. The estimated volume of this stockpile was 4,000 cubic yards. GeoEngineers collected 14 six-point composite soil samples. Arsenic was not detected. Lead was either not detected or detected at concentrations below the MTCA Method A cleanup level of 250 mg/kg (Table 5). The contractor reused the soil from this stockpile as fill during construction.

Stockpile 2 included soil excavated within the Health Care Memory Care (HCMC) building footprint. GeoEngineers collected eight six-point composite samples from this, 2,000 cubic yard stockpile. All lead concentrations were below the cleanup level for lead. Arsenic concentrations were above the MTCA Method A cleanup level of 20 mg/kg. The contractor placed the soil from this stockpile in the containment cell in Area 1.

Stockpile 3 was generated during excavation for street and utilities surrounding the HCMC building. The estimated volume of the stockpile was 4,000 cubic yards. GeoEngineers collected eight six-point composite soil samples from this stockpile. All the lead concentrations were below the cleanup level of 250 mg/kg for lead. One of the eight samples exceeded the cleanup level of 20 mg/kg for arsenic. The soil from this stockpile was capped in Area 2.

Stockpile 4 of approximately 300 cubic yards was generated during excavation at the Bristol View Apartment building. GeoEngineers collected two six-point composite soil samples. Both samples were below the respective cleanup levels for arsenic and lead. The contractor reused the soil from this stockpile on the Property as fill.

GeoEngineers submitted all the samples to OnSite Environmental Laboratory in Redmond, Washington for arsenic and lead analysis with EPA Method 6010C. For a summary of sampling results, refer to Table 5. For the comprehensive results of the confirmational sampling on the Property, refer to Enclosure D.

Table 5. Results of the Stockpile Sampling on the Property

| Sample ID2 | Sample Date | Source of Stockpile | Arsenic (mg/kg) | Lead (mg/kg) | Final Disposition of Soil |
|--|-------------|--|-----------------|--------------|--------------------------------|
| Stockpile 1 | | | | | |
| FTJ-STK1-1 | 11/6/2017 | Non-contaminated Soil Removed from 2 to 25 feet bgs from Remedial Area 1 | 5.8 | 5.8 | Reused on the Property as Fill |
| FTJ-STK1-2 | 11/6/2017 | | 5.7 | 5.7 | |
| FTJ-STK1-3 | 11/6/2017 | | 5.6 | 5.6 | |
| FTJ-STK1-4 | 11/6/2017 | | 5.7 | 5.7 | |
| FTJ-STK1-5 | 11/6/2017 | | 5.6 | 5.6 | |
| FTJ-STK1-6 | 11/6/2017 | | 5.7 | 8.4 | |
| FTJ-STK1-7 | 11/6/2017 | | 5.7 | 5.7 | |
| FTJ-STK1-8 | 11/6/2017 | | 5.7 | 5.7 | |
| FTJ-STK1-9 | 11/6/2017 | | 5.7 | 5.7 | |
| FTJ-STK1-10 | 11/6/2017 | | 5.8 | 5.8 | |
| FTJ-STK1-11 | 11/6/2017 | | 5.8 | 5.8 | |
| FTJ-STK1-12 | 11/6/2017 | | 5.8 | 5.8 | |
| FTJ-STK1-13 | 11/6/2017 | | 5.8 | 5.8 | |
| FTJ-STK1-14 | 11/6/2017 | | 5.9 | 5.9 | |
| Stockpile 2 | | | | | |
| FTJ-STK2-1 | 1/8/2018 | Soil in area of the new Healthcare/ Memory Care Building (HCMC) | 19 | 20 | Capped in Area 1 |
| FTJ-STK2-2 | 1/8/2018 | | 39 | 48 | |
| FTJ-STK2-3 | 1/8/2018 | | 16 | 22 | |
| FTJ-STK2-4 | 1/8/2018 | | 36 | 48 | |
| FTJ-STK2-5 | 1/8/2018 | | 38 | 36 | |
| FTJ-STK2-6 | 1/8/2018 | | 68 | 63 | |
| FTJ-STK2-7 | 1/8/2018 | | 60 | 57 | |
| FTJ-STK2-8 | 1/8/2018 | | 32 | 47 | |
| Stockpile 3 | | | | | |
| FTJ-STK3-1 | 1/8/2018 | Soil Excavated for Streets and Utilities Near HCMC Building | 28 | 35 | Capped in Area 2 |
| FTJ-STK3-2 | 1/8/2018 | | 7.4 | 8.9 | |
| FTJ-STK3-3 | 1/8/2018 | | 27 | 64 | |
| FTJ-STK3-4 | 1/8/2018 | | 14 | 32 | |
| FTJ-STK3-5 | 1/8/2018 | | 12 | 22 | |
| FTJ-STK3-6 | 1/8/2018 | | 9.7 | 20 | |
| FTJ-STK3-7 | 1/8/2018 | | 13 | 26 | |
| FTJ-STK3-8 | 1/8/2018 | | 15 | 24 | |
| Stockpile 4 | | | | | |
| BV-STK4-1 | 06/07/18 | Bristol View | 5.5 | 5.5 | Reused on the Property as Fill |
| BV-STK4-2 | 06/07/18 | Building Footprint | 6.0 | 5.9 | |
| MTCA Method A cleanup level for unrestricted | | | 20 | 250 | NA |

Values in **bold** represent concentrations above the MTCA Method A cleanup level.
 Values in **bold red** represent concentrations twice the cleanup levels.

2. Cleanup of the Asarco Site as a Whole.

Ecology has concluded that further remedial action under MTCA is still necessary elsewhere at the Asarco Site. In other words, while your cleanup constitutes the final action for the Property, it is only an “interim action” for the Asarco Site as a whole.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and cap monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional controls are necessary at the Site:

- Restrictions to access contaminated soil at the Property.
- Restrictions to activities that would compromise the integrity of the cap, including drilling, digging, planting deep-rooted or invasive plants, piercing the cap with sampling devise, post stake or similar device, grading, excavation, installation of underground utilities, removal of the cap or the retaining wall, or application of loads in excess of the cap load bearing capacity.

To implement those controls, an Environmental Covenant has been recorded on the following parcels of real property in Pierce County:

- 6930000413.
- 6930000393.
- 6930000381.

A copy of the Covenant is included in **Enclosure F**.

2. Operation and Maintenance of Engineered Controls.

Engineered controls prevent or limit movement of, or exposure to, hazardous substances. The following engineered control is necessary at the Site:

- Use of Type 1 cap – one foot of clean soil placed on top of geotextile material as a containment cap.
- Use of buildings and paved parking as a containment cap.

3. Performance of Confirmational Monitoring.

Confirmational monitoring is necessary at the Property to confirm the long-term effectiveness of the cleanup. The monitoring data will be used by Ecology during periodic reviews of post-cleanup conditions. Required confirmational monitoring includes regular reporting on the condition of the containment cap.

For the first two years from the date of this letter, or as required by Ecology, the Property owners shall provide to Ecology, twice a year, a report with photographs and a description of the condition of the cap, also detailing any necessary or anticipated maintenance for the containment cap or changes to conditions at the Site affecting the remedy. After two years, the owners of the Property shall provide annual reports to Ecology.

Periodic Review of Post-Cleanup Conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Property to ensure that they remain protective of human health and the environment.

If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

Listing of the Asarco Site

Based on this opinion, Ecology will update the status of remedial action at the Asarco Site on our database of hazardous waste sites. However, because further remedial action is still necessary elsewhere at the Asarco Site, we will not remove the Asarco Site from our lists of hazardous waste sites. Furthermore, the Property will remain listed as part of the Asarco Site because the cleanup of the Property does not change the boundaries of the Asarco Site.

Limitations of the Opinion

1. Opinion does not Settle Liability with the State.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Property. This opinion does not:

- Change the boundaries of the Asarco Site.
- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).

2. Opinion does not constitute a Determination of Substantial Equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080 and WAC 173-340-545.

3. State is Immune from Liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70A.305. 170(6).

Termination of Agreement

Thank you for cleaning up your Property under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW1592).

For more information about the VCP and the cleanup process, please visit our [Voluntary Cleanup Program webpage](#).⁸ If you have any questions about this opinion, please contact at (360) 999-9593 or at eva.barber@ecy.wa.gov.

Sincerely,



Eva L. Barber
Technical Assistance Coordinator
Southwest Regional Office
Toxics Cleanup Program

EB/tm

Enclosures: A – Legal Descriptions, Addresses, and General Description of the Property
 B – Site Description of Asarco Tacoma Smelter Site
 C – Basis for the Opinion: List of Documents
 D – Results of the 2005 Soil Characterization and Confirmational Sampling by EPA
 E – Results of the 2016 Soil Characterization and 2018 and 2019 Confirmational
 Sampling by GeoEngineers
 F – Environmental Covenant

cc by email: Tricia DeOme, GeoEngineers, Inc., tdeome@geoengineers.com
 Shanta Frantz, City of Tacoma, sfrantz@cityoftacoma.org
 Marian Abbett, Ecology, marian.abbett@ecy.wa.gov
 Tim Mullin, Ecology, tim.mullin@ecy.wa.gov
 Ecology Site File

⁸ <https://www.ecy.wa.gov/vcp>

Enclosure A

Legal Description, Addresses, and General Description of the Property

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Legal Property Descriptions

Parcel # 6930000413

Section 23 Township 21 Range 02 Quarter 21 POINT DEFIANCE PARK REPLAT L 7 THRU 37 B 7 INC VAC ALLEY ALSO L 1 THRU 29 B 8 INC VAC ALLEY ALSO TOG/W NORTH PARK AVE ABUTT ON N VAC BY ORD 27115 TOG/ VAC VASSAULT ST ABUTT ON W ADMIN COMB TO RESTORE PARCEL SEG'D FOR TAX PURPOSES ONLY COMB OF 041-1 & 041-2 SEG 2006-0910 JU 3/8/06JU

Parcel # 6930000393

Section 23 Township 21 Range 02 Quarter 21 POINT DEFIANCE PARK REPLAT L 3 & 4 B 7 INC POR OF ALLEY ABUTT ON W & POR OF NORTH PARK AVE ABUTT ON N VAC BY ORD 27115 ADMIN COMB TO RESTORE PARCEL SEG'D FOR TAX PURPOSES ONLY COMB OF 039-1 & 039-2 SEG 2006-0910 JU 3/8/06JU

Parcel # 6930000381

Section 23 Township 21 Range 02 Quarter 21 POINT DEFIANCE PARK REPLAT: POINT DEFIANCE PARK REPLAT NE OF NW 23-21-02E COMBO FOR TAX PURPOSES ONLY L 1 & 2 B 7 TOG/W L 5 & 6 B 7 APPROX 13,200 SQ FT COMB 038-0 & 040-0 SEG F-0818 JU 3/7/94JU

Property Description

The Property is located at 5340 North Bristol Street, Tacoma, Washington (1138819.439, 723721.671NAD State Plane WA South). The Property consists of approximately 18.13 acres of land covering three Pierce County parcels. The ground surface elevation slopes to the north from approximately 170 to 210 feet relative to the Old City of Tacoma Datum (OCTD). The City of Tacoma zoning for the Property is multiple family dwelling and two family dwelling. Zoning of surrounding properties consists of single-family dwelling. The facility was originally developed in 1924 with a residential building located on the eastern portion of the Property. The current use of this facility is an elderly retirement facility. Several buildings and 11 smaller duplexes and various support structures and carports are currently located on the Property.

According to the Geologic Map of the Gig Harbor Quadrangle, Pierce County Washington (Booth & Troost, in review), soil consists of Vashon Recessional Outwash (Qvr). The recessional outwash typically overlies glacially consolidated soil, including Vashon Glacial Till (Qvt), Vashon Advance Outwash (Qva), and pre-Vashon deposits, based on GeoEngineers' professional experience and geologic descriptions provided by Booth and Troost.

GeoEngineers observed zones of fill underlain by undisturbed recessional outwash and/or glacially consolidated soil in our subsurface explorations. The fill consisted of a mixture of reworked and disturbed native soils, mixed with occasional organics and construction debris such as concrete and brick and generally ranged in thickness from 1 to 8 feet but was up to 25-feet-thick in areas.

The recessional outwash deposits typically consisted of a mixture of sand and gravel with variable silt content typically found in a medium dense to dense condition and up to 18.5 feet thick. The recessional outwash unit was not present in the explored areas of the site; instead medium dense to very dense soil deposits were observed. They varied in composition from gravel with silt and sand to clay with sand below the fill or recessional outwash. For the purposes of this report, the soils were combined into a single group (glacially consolidated soil) that may include weathered glacial till, glacial till, and advance outwash.

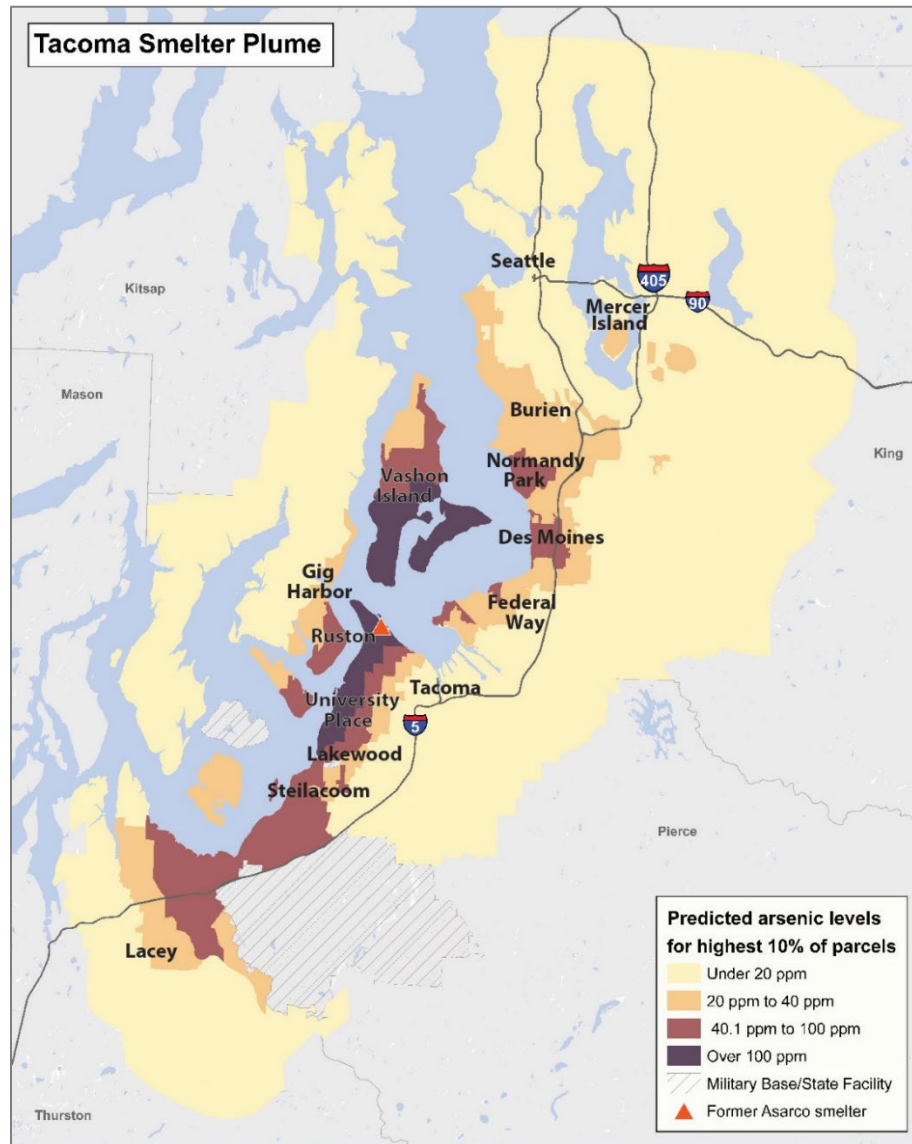
Perched groundwater was observed during the excavation of test pits TP1, TP7, TP8, and TP9 at depths ranging between 4 and 8.5 feet bgs. The perched groundwater appears to be isolated, discontinuous and dispersed throughout the site. Seasonal perched groundwater conditions may develop at other locations on the Property. Groundwater levels will likely be lowest during the late summer and early fall months. Groundwater levels should be expected to fluctuate based on season and rainfall events. No regional groundwater table was observed.

Enclosure B

Site Description of Asarco Tacoma Smelter Site

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Asarco Tacoma Smelter Site



An interactive color map can be found at: <https://dirtalert.info/>.

For almost 100 years, the Asarco Company operated a copper smelter in Tacoma. Air pollution from the smelter settled on the surface soil over a vast region—more than 1,000 square miles of the Puget Sound basin. Elevated levels of contamination are found as far south as the Nisqually Ridge and as far north as Seattle (West Seattle). Additionally, elevated levels of contamination are found as far west as the Kitsap Peninsula and as far east as Kent and Bellevue. Arsenic, lead, cadmium, and other heavy metals are still in the soil as a result of this pollution. The area has elevated levels of arsenic, lead, and cadmium in the soil due to air emissions from the Asarco smelter.

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Enclosure C

Basis for the Opinion: List of Documents

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List of Documents

1. Eva Barber (Ecology), Personal communication with Tricia DeOme GeoEngineers (Geo) regarding clarification of cleanup and capping process, June 23,2020.
2. *Geo, Phase I Cleanup Action Report Franke Tobey Jones Master Plan Phase I, Tacoma, Washington, for Franke Tobey Jones, May 18, 2020.*
3. *Geo, Remedial Investigation and Cleanup Action Plan Franke Tobey Jones – Master Plan Phase I & II, Tacoma, Washington, April 14, 2017.*
4. *Geo, Phase II Development Cleanup Action Plan, Franke Tobey Jones, Tacoma, Washington, June 12, 2017.*
5. City of Tacoma Planning and Development Services, *Mitigated Determination of NonSignificance (MDNS), File Number LU16-0101, July 14, 2016.*
6. Tricia DeOme (Geo), Email communication regarding remediation methodology for the Remedial Area 3, May 29, 2017.

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Enclosure D

Results of the 2005 Soil Characterization Sampling by EPA

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Enclosure E

Results of the 2016 Soil Characterization and
2018 and 2019 Confirmational Sampling by GeoEngineers

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Results of the 2016 Soil Characterization and 2018 and 2019 Confirmational Sampling by GeoEngineers

| Sample ID | Sample Date | Depth (feet bgs) | Arsenic (mg/kg) | Lead (mg/kg) |
|-------------|-------------|------------------|-----------------|--------------|
| DP16-0-0.5 | 11/2/2016 | 0 to 0.5 | 11 | 13 |
| DP24-0-0.5 | 11/2/2016 | 0 to 0.5 | 34 | 21 |
| DP28-0-0.5 | 11/2/2016 | 0 to 0.5 | 15 | 27 |
| DP5-0-0.5 | 11/2/2016 | 0 to 0.5 | 69 | |
| DP6-0-0.5 | 11/2/2016 | 0 to 0.5 | 47 | 57 |
| DP7-0-0.5 | 11/2/2016 | 0 to 0.5 | 4.5 | 4.6 |
| DP8-0-0.5 | 11/2/2016 | 0 to 0.5 | 17 | 15 |
| TP1-0-0.5 | 11/2/2016 | 0 to 0.5 | 17 | |
| TP10-0-0.5 | 11/2/2016 | 0 to 0.5 | 26 | |
| TP11-0-0.5 | 11/2/2016 | 0 to 0.5 | 130 | 89 |
| TP3-0-0.5 | 11/2/2016 | 0 to 0.5 | 6.0 | 14 |
| TP4-0-0.5 | 11/2/2016 | 0 to 0.5 | 3.3 | 8.1 |
| TP6-0-0.5 | 11/2/2016 | 0 to 0.5 | 69 | 44 |
| TP9-0-0.5 | 11/2/2016 | 0 to 0.5 | 130 | |
| DP10-1-1.5 | 11/2/2016 | 1 to 1.5 | 26 | 24 |
| DP1-1-1.5 | 11/2/2016 | 1 to 1.5 | 7.4 | 10 |
| DP12-1-1.5 | 11/2/2016 | 1 to 1.5 | 14 | 21 |
| DP13-1-1.5 | 11/2/2016 | 1 to 1.5 | 4.3 | 4.2 |
| DP15-1-1.5 | 11/2/2016 | 1 to 1.5 | 57 | 210 |
| DP17-1-1.5 | 11/2/2016 | 1 to 1.5 | 13 | 20 |
| DP19-1-1.5 | 11/2/2016 | 1 to 1.5 | 75 | 190 |
| DP20-1-1.5 | 11/2/2016 | 1 to 1.5 | 28 | 20 |
| DP2-1-1.5 | 11/2/2016 | 1 to 1.5 | 16 | 34 |
| DP21-1-1.5 | 11/2/2016 | 1 to 1.5 | 140 | 280 |
| DP22-1-1.5 | 11/2/2016 | 1 to 1.5 | 12 | 5.9 |
| DP23-1-1.5 | 11/2/2016 | 1 to 1.5 | 38 | 58 |
| DP24-1-1.5 | 11/2/2016 | 1 to 1.5 | 23 | |
| DP25-1-1.5 | 11/2/2016 | 1 to 1.5 | 9.2 | 13 |
| DP26-1-1.5 | 11/2/2016 | 1 to 1.5 | 3.8 | 18 |
| DP27-1-1.5 | 11/2/2016 | 1 to 1.5 | 31 | 34 |
| DP28-1-1.5 | 11/2/2016 | 1 to 1.5 | 13 | 17 |
| DP3-1-1.5 | 11/2/2016 | 1 to 1.5 | 12 | 18 |
| DP4-1-1.5 | 11/2/2016 | 1 to 1.5 | 2.9 | 2.9 |
| DP5-1-1.5 | 11/2/2016 | 1 to 1.5 | 15 | 5.8 |
| DP6-1-1.5 | 11/2/2016 | 1 to 1.5 | 11 | |
| DP9-1-1.5 | 11/2/2016 | 1 to 1.5 | 52 | 31 |
| TP10-1-1.5 | 11/2/2016 | 1 to 1.5 | 19 | 2.9 |
| TP1-1-1.5 | 11/2/2016 | 1 to 1.5 | 180 | 310 |
| TP11-1-1.5 | 11/2/2016 | 1 to 1.5 | 6.9 | |
| TP12A-1-1.5 | 11/2/2016 | 1 to 1.5 | 14 | 9.0 |
| TP2-1-1.5 | 11/2/2016 | 1 to 1.5 | 13 | 12 |
| TP5-1-1.5 | 11/2/2016 | 1 to 1.5 | 49 | 60 |
| TP6-1-1.5 | 11/2/2016 | 1 to 1.5 | 8.9 | |

| Sample ID | Sample Date | Depth (feet bgs) | Arsenic (mg/kg) | Lead (mg/kg) |
|------------|-------------|------------------|-----------------|--------------|
| TP7-1-1.5 | 11/2/2016 | 1 to 1.5 | 12 | 13 |
| TP8-1-1.5 | 11/2/2016 | 1 to 1.5 | 6.6 | 7.4 |
| TP9-1-1.5 | 11/2/2016 | 1 to 1.5 | 19 | 3.5 |
| DP11-2-2.5 | 11/2/2016 | 2 to 2.5 | 10 | 14 |
| DP1-2-2.5 | 11/2/2016 | 2 to 2.5 | 9.8 | 14 |
| DP13-2-2.5 | 11/2/2016 | 2 to 2.5 | 30 | 41 |
| DP14-2-2.5 | 11/2/2016 | 2 to 2.5 | 27 | 36 |
| DP15-2-2.5 | 11/2/2016 | 2 to 2.5 | 41 | 48 |
| DP16-2-2.5 | 11/2/2016 | 2 to 2.5 | 21 | 44 |
| DP18-2-2.5 | 11/2/2016 | 2 to 2.5 | 13 | 19 |
| DP19-2-2.5 | 11/2/2016 | 2 to 2.5 | 59 | 14 |
| DP20-2-2.5 | 11/2/2016 | 2 to 2.5 | 27 | 10 |
| DP21-2-2.5 | 11/2/2016 | 2 to 2.5 | 9.4 | 5.7 |
| DP22-2-2.5 | 11/2/2016 | 2 to 2.5 | 3.1 | 2.7 |
| DP24-2-2.5 | 11/2/2016 | 2 to 2.5 | 3.6 | |
| DP26-2-2.5 | 11/2/2016 | 2 to 2.5 | 4.4 | 7.0 |
| DP27-2-2.5 | 11/2/2016 | 2 to 2.5 | 2.9 | |
| DP4-2-2.5 | 11/2/2016 | 2 to 2.5 | 3 | 3 |
| DP6-2-2.5 | 11/2/2016 | 2 to 2.5 | 5.2 | 4.6 |
| DP9-2-2.5 | 11/2/2016 | 2 to 2.5 | 7.4 | |
| TP10-2-2.5 | 11/2/2016 | 2 to 2.5 | 2.9 | |
| TP11-2-2.5 | 11/2/2016 | 2 to 2.5 | 71 | 92 |
| TP1-2-2.5 | 11/2/2016 | 2 to 2.5 | 3.5 | 4.1 |
| TP5-2-2.5 | 11/2/2016 | 2 to 2.5 | 3.1 | |
| TP7-2-2.5 | 11/2/2016 | 2 to 2.5 | 55 | 29 |
| TP8-2-2.5 | 11/2/2016 | 2 to 2.5 | 92 | 35 |
| TP9-2-2.5 | 11/2/2016 | 2 to 2.5 | 6.6 | |
| DP10-3-3.5 | 11/2/2016 | 3 to 3.5 | 20 | 42 |
| DP11-3-3.5 | 11/2/2016 | 3 to 3.5 | 120 | 110 |
| DP12-3-3.5 | 11/2/2016 | 3 to 3.5 | 37 | 75 |
| DP17-3-3.5 | 11/2/2016 | 3 to 3.5 | 25 | 39 |
| DP19-3-3.5 | 11/2/2016 | 3 to 3.5 | 15 | |
| DP20-3-3.5 | 11/2/2016 | 3 to 3.5 | 2.8 | |
| DP21-3-3.5 | 11/2/2016 | 3 to 3.5 | 6.9 | 7.5 |
| DP26-3-3.5 | 11/2/2016 | 3 to 3.5 | 35 | 59 |
| DP3-3-3.5 | 11/2/2016 | 3 to 3.5 | 41 | |
| DP9-3-3.5 | 11/2/2016 | 3 to 3.5 | 12 | 20 |
| TP11-3-3.5 | 11/2/2016 | 3 to 3.5 | 2.9 | |
| TP1-3-3.5 | 11/2/2016 | 3 to 3.5 | 3.0 | |
| TP2-3-3.5 | 11/2/2016 | 3 to 3.5 | 14 | |
| TP7-3-3.5 | 11/2/2016 | 3 to 3.5 | 11 | |
| TP8-3-3.5 | 11/2/2016 | 3 to 3.5 | 3.1 | |
| DP26-4-4.5 | 11/2/2016 | 4 to 4.5 | 74 | 140 |
| DP3-4-4.5 | 11/2/2016 | 4 to 4.5 | 3.7 | 3.8 |
| DP10-5-5.5 | 11/2/2016 | 5 to 5.5 | 4.7 | |
| DP11-5-5.5 | 11/2/2016 | 5 to 5.5 | 6.8 | |
| DP14-5-5.5 | 11/2/2016 | 5 to 5.5 | 58 | 91 |

| Sample ID | Sample Date | Depth (feet bgs) | Arsenic (mg/kg) | Lead (mg/kg) |
|-------------|-------------|------------------|-----------------|--------------|
| DP15-5-5.5 | 11/2/2016 | 5 to 5.5 | 81 | 200 |
| DP17-5-5.5 | 11/2/2016 | 5 to 5.5 | 56 | 85 |
| DP23-5-5.5 | 11/2/2016 | 5 to 5.5 | 16 | 5.0 |
| DP26-5-5.5 | 11/2/2016 | 5 to 5.5 | 2.8 | |
| DP28-5-5.5 | 11/2/2016 | 5 to 5.5 | 13 | 28 |
| TP2-5-5.5 | 11/2/2016 | 5 to 5.5 | 26 | 38 |
| DP13-6-6.5F | 11/2/2016 | 6 to 6.5 | 53 | 88 |
| DP15-6-6.5 | 11/2/2016 | 6 to 6.5 | 7.1 | |
| DP1-6-6.5 | 11/2/2016 | 6 to 6.5 | 90 | 130 |
| DP18-6-6.5 | 11/2/2016 | 6 to 6.5 | 160 | 120 |
| TP2-6-6.5 | 11/2/2016 | 6 to 6.5 | 2.8 | |
| DP13-7-7.5 | 11/2/2016 | 7 to 7.5 | 22 | |
| DP14-7-7.5 | 11/2/2016 | 7 to 7.5 | 120 | 120 |
| DP1-7-7.5 | 11/2/2016 | 7 to 7.5 | 23 | 39 |
| DP18-7-7.5 | 11/2/2016 | 7 to 7.5 | 5.5 | |
| DP23-7-7.5 | 11/2/2016 | 7 to 7.5 | 16 | 21 |
| DP12-8-8.5 | 11/2/2016 | 8 to 8.5 | 67 | 130 |
| DP13-8-8.5 | 11/2/2016 | 8 to 8.5 | 4.0 | |
| DP14-8-8.5 | 11/2/2016 | 8 to 8.5 | 5.8 | |
| DP17-8-8.5 | 11/2/2016 | 8 to 8.5 | 35 | 22 |
| DP1-8-8.5 | 11/2/2016 | 8 to 8.5 | 4.5 | |
| DP23-8-8.5 | 11/2/2016 | 8 to 8.5 | 11 | 16 |
| DP24-8-8.5 | 11/2/2016 | 8 to 8.5 | 2.8 | 2.8 |
| DP25-8-8.5F | 11/2/2016 | 8 to 8.5 | 9.1 | 14 |
| TP9-8-8.5 | 11/2/2016 | 8 to 8.5 | 2.9 | 2.9 |
| DP12-9-9.5 | 11/2/2016 | 9 to 9.5 | 3.2 | |
| DP16-9-9.5F | 11/2/2016 | 9 to 9.5 | 110 | 280 |
| DP17-9-9.5 | 11/2/2016 | 9 to 9.5 | 6.6 | |
| DP25-9-9.5 | 11/2/2016 | 9 to 9.5 | 49 | 55 |

Values in **bold** represent concentrations above the MTCA Method A cleanup level.

Values in **bold red** represent concentrations twice the cleanup level.

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| Sample Identification | DP1-2-2.5 | DP4-2-2.5 | DP6-2-2.5 | DP13-6-6.5F | DP16-8.5-9F | DP16-9-9.5F | DP21-2-2.5 | DP25-8-8.5F | TP2-2.5-3-F | MTCA Cleanup Level |
|---|-----------------------|-----------|-----------|--------------------------|-----------------------|-------------|------------|-------------|-------------|----------------------|
| Sample Date | 11/1/16 | 11/1/16 | 11/1/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/9/16 | |
| Sample Depth (ft bgs) | 2 to 2.5 | 2 to 2.5 | 2 to 2.5 | 6 to 6.5 | 8.5 to 9 | 9 to 9.5 | 2 to 2.5 | 8 to 8.5 | 2.5 to 3 | |
| Field Screening | SS | SS | SS | SS | SS | NS | SS | SS | SS | |
| Soil Type | Fill | Native | Native | Fill | Fill | Fill | Fill | Fill | Fill | |
| Building Location | Sound View Apartments | | | Skilled Nursing Facility | | | | None | Duplex | |
| Petroleum Hydrocarbons (mg/kg)³ – Hydrocarbon Identification (NWTPH-HCID) | | | | | | | | | | |
| Gasoline-range hydrocarbons | 23 U | 24 U | 25 U | 28 U | 26 U | -- | 24 U | 24 U | 27 U | 30/100 ¹³ |
| Diesel-range hydrocarbons | 58 U | 61 U | 62 U | 69 U | 64 U | -- | 60 U | 60 U | 65 U | 2,000 |
| Lube oil-range hydrocarbons | 120 U | 120 U | 120 U | 140 U | DET | -- | 120 U | 120 U | 130 | 2,000 |
| NWTPH-Dx⁴ | | | | | | | | | | |
| Diesel-range hydrocarbons | -- | -- | -- | -- | 90 | 35 UJ | -- | -- | 32 U | 2,000 |
| Lube oil-range hydrocarbons | -- | -- | -- | -- | 700 | 160 J | -- | -- | 220 | 2,000 |
| RCRA Metals (mg/kg)⁵ | | | | | | | | | | |
| Barium | 110 | 59 | 180 | 130 | 110 | -- | 130 | 150 | 100 | 16,000 |
| Cadmium | 0.58 U | 0.61 U | 0.62 U | 1.6 | 1.0 | -- | 0.60 U | 0.60 U | 1.0 | 2 |
| Chromium | 83 | 35 | 40 | 71 | 40 | -- | 53 | 46 | 49 | 2,000 |
| Mercury | 0.29 U | 0.30 U | 0.31 U | 1.1 | 0.43 | -- | 0.30 U | 0.30 U | 0.35 | 2 |
| Selenium | 12 U | 12 U | 12 U | 14 U | 13 U | -- | 12 U | 12 U | 13 U | 400 ¹⁴ |
| Silver | 1.2 U | 1.2 U | 1.2 U | 1.4 U | 1.3 U | -- | 1.2 U | 1.2 U | 1.3 U | 400 ¹⁴ |
| VOCs (mg/kg)⁶ | | | | | | | | | | |
| Benzene | -- | -- | -- | 0.0013 U | 0.0012 UJ | -- | -- | 0.00087 U | -- | 0.03 |
| Ethylbenzene | -- | -- | -- | 0.0013 U | 0.0051 J | -- | -- | 0.00087 U | -- | 6 |
| Toluene | -- | -- | -- | 0.0097 | 0.0062 UJ | -- | -- | 0.0043 U | -- | 7 |
| Total Xylenes ⁷ | -- | -- | -- | 0.0026 U | 0.0025 UJ | -- | -- | 0.0017 U | -- | 9 |
| 2-Butanone (MEK) ⁸ | -- | -- | -- | 0.078 | 0.13 J | -- | -- | 0.0043 U | -- | 48,000 ¹⁴ |
| Acetone ⁸ | -- | -- | -- | 0.99 | 0.58 J | -- | -- | 0.064 | -- | 72,000 ¹⁴ |
| Carbon Disulfide ⁸ | -- | -- | -- | 0.0045 | 0.0015 J | -- | -- | 0.00087 U | -- | 8,000 ¹⁴ |
| Methylene Chloride ⁸ | -- | -- | -- | 0.013 U | 0.085 J ¹² | -- | -- | 0.0087 U | -- | 0.02 |
| PAHs⁹ (mg/kg) | | | | | | | | | | |
| Acenaphthene | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | 4,800 ¹⁴ |
| Acenaphthylene | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | NE |
| Anthracene | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | 24,000 ¹⁴ |
| Fluoranthene | 0.0078 U | 0.0081 U | 0.0082 U | 0.018 | 0.013 | 0.016 J | 0.0080 U | 0.0081 U | 0.020 | 3,200 ¹⁴ |

| Sample Identification | DP1-2-2.5 | DP4-2-2.5 | DP6-2-2.5 | DP13-6-6.5F | DP16-8.5-9F | DP16-9-9.5F | DP21-2-2.5 | DP25-8-8.5F | TP2-2.5-3-F | MTCA Cleanup Level |
|---|-----------------------|-----------|-----------|--------------------------|-------------|-------------|------------|-------------|-------------|--|
| Sample Date | 11/1/16 | 11/1/16 | 11/1/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/2/16 | 11/9/16 | |
| Sample Depth (ft bgs) | 2 to 2.5 | 2 to 2.5 | 2 to 2.5 | 6 to 6.5 | 8.5 to 9 | 9 to 9.5 | 2 to 2.5 | 8 to 8.5 | 2.5 to 3 | |
| Field Screening | SS | SS | SS | SS | SS | NS | SS | SS | SS | |
| Soil Type | Fill | Native | Native | Fill | Fill | Fill | Fill | Fill | Fill | |
| Building Location | Sound View Apartments | | | Skilled Nursing Facility | | | | None | Duplex | |
| Fluorene | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | 3,200 ¹⁴ |
| Phenanthrene | 0.0078 U | 0.0081 U | 0.0082 U | 0.010 | 0.011 | 0.016 J | 0.0080 U | 0.0081 U | 0.016 | NE |
| Benzo(g,h,i)perylene | 0.0078 U | 0.0081 U | 0.0082 U | 0.013 | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | NE |
| Pyrene | 0.0078 U | 0.0081 U | 0.0082 U | 0.017 | 0.012 | 0.0093 J | 0.0080 U | 0.0081 U | 0.016 | 2,400 ¹⁴ |
| Naphthalenes^{9, 10} (mg/kg) | | | | | | | | | | |
| Naphthalene | 0.0078 U | 0.0081 U | 0.0082 U | 0.017 | 0.013 | 0.016 J | 0.0080 U | 0.0081 U | 0.0086 U | MTCA Method A ULU cleanup level for the sum of all Naphthalenes is 5 mg/kg |
| 1-Methylnaphthalene | 0.0078 U | 0.0081 U | 0.0082 U | 0.010 | 0.0085 U | 0.0094 J | 0.0080 U | 0.0081 U | 0.0086 U | |
| 2-Methylnaphthalene | 0.0078 U | 0.0081 U | 0.0082 U | 0.018 | 0.0085 U | 0.011 J | 0.0080 U | 0.0081 U | 0.0086 U | |
| Total Naphthalenes ⁵ | -- | -- | -- | 0.045 | 0.013 | 0.036 J | -- | -- | -- | |
| cPAHs⁹ (mg/kg) | | | | | | | | | | |
| Benzo (a) anthracene (TEF 0.1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0088 | MTCA Method A ULU cleanup level for the sum of all cPAHs is 0.1 mg/kg |
| Chrysene (TEF 0.01) | 0.0078 U | 0.0081 U | 0.0082 U | 0.016 | 0.015 | 0.01 J | 0.0080 U | 0.0081 U | 0.012 | |
| Benzo (b) fluoranthene (TEF 0.1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.022 | 0.018 | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.015 | |
| Benzo (j,k) fluoranthene (TEF 0.1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | |
| Benzo (a) pyrene (TEF 1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.015 | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | |
| Indeno (1,2,3-cd) pyrene (TEF 0.1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.013 | 0.0086 | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | |
| Dibenz (a,h) anthracene (TEF 0.1) | 0.0078 U | 0.0081 U | 0.0082 U | 0.0092 U | 0.0085 U | 0.0092 UJ | 0.0080 U | 0.0081 U | 0.0086 U | |
| Total TTEC of cPAHs ¹¹ (ND=0.5 RL) | 0.006 UT | 0.006 UT | 0.006 UT | 0.02 T | 0.008 T | 0.007 JT | 0.006 UT | 0.006 UT | 0.008 T | |

Notes:

¹ Chemical analysis performed by OnSite Environmental, Inc. of Redmond, Washington.

² Sample identification is the boring number – starting depth – ending depth in feet (i.e., soil sample B1-5-6 was collected from boring B1 from 5 to 6 feet bgs).

³ Petroleum hydrocarbons were analyzed by Ecology-approved method NWTPH-HCID.

⁴ Ecology-approved method NWTPH-Dx with acid/silica gel cleanup.

⁵ Metals analyzed by United States Environmental Protection Agency (EPA) 6000/7000 series method.

⁶ Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) method 8260B. Only detected analytes shown. See lab report in Appendix C for full list of analytes.

⁷ Total xylenes is the sum of m, p xylene, and o-xylene. The lower detection limit is shown.

⁸ Acetone, 2-Butanone, Carbon Disulfide, and methylene chloride are common laboratory contaminants.

⁹ Polycyclic aromatic hydrocarbons (PAHs) were analyzed by United States Environmental Protection Agency (EPA) method 8270D/SIM.

¹⁰ Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene.

¹¹ Total Toxic Equivalent Concentration (TTEC) is the sum of each individual cPAH concentration multiplied by its corresponding Toxicity Equivalency Factor (TEF).

¹² The laboratory noted that the sample vials for Sample DP16-8.5-9F contained grit between the lip and cap septum, rendering them unusable; therefore, the samples were extracted from 8 ounce jars and analyzed. Consequently, some loss of volatiles may have occurred and methylene chloride may have been introduced into the samples during sample preparation. For these reasons, the positive results and reporting limits for all volatile target analytes were qualified as estimated (J and UJ) in this sample.

¹³ Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.

¹⁴ MTCA Method B criteria level represented because MTCA Method A cleanup level has not been established.

SS = Slight Sheen

EPA = United States Environmental Protection Agency

NE = not established

PAHs = polycyclic aromatic hydrocarbons

N/A = not applicable

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

bgs = below ground surface

ULU = unrestricted land use

MTCA = Model Toxics Control Act

TTEC = Total Toxic Equivalent Concentration

mg/kg = milligram per kilogram

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2

-- = sample not analyzed for this compound.

T = Total Sum

J = Estimated result

U = Analyte was not detected at or greater than the listed practical quantitative limit.

Bold font type indicates that the analyte was detected.

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| Sample Location | Sample ID ² | Sample Depth (feet bgs) | Sample Date | Arsenic (mg/kg) | Lead (mg/kg) | Remedial Action |
|--|------------------------|-------------------------|-------------|-----------------|--------------|-----------------|
| Bristol View Apartments | BV-CONF-1 | 0 to 0.5 | 6/7/2018 | 7.1 | 9.4 | Type 1 Cap |
| | BV-CONF-2 | 0 to 0.5 | 6/7/2018 | 5.6 U | 6.7 | |
| | BV-CONF-3 | 0 to 0.5 | 6/7/2018 | 8.4 | 11 | |
| | BV-CONF-4 | 0 to 0.5 | 6/7/2018 | 5.4 U | 5.4 U | |
| | BV-CONF-5 | 0 to 0.5 | 6/7/2018 | 42 | 52 | |
| | BV-CONF-6 | 0 to 0.5 | 6/11/2018 | 5.7 | 6.7 | |
| | BV-CONF-7 | 0 to 0.5 | 6/11/2018 | 5.4 U | 5.4 U | |
| | BV-CONF-6B | 0.5 to 1 | 6/11/2018 | 5.6 U | 5.6 U | |
| Healthcare/ Memory Care Building | HCMC-CONF-1 | 0 to 0.5 | 6/7/2018 | 5.4 U | 5.6 | Type 1 Cap |
| | HCMC-CONF-2 | 0 to 0.5 | 6/7/2018 | 7.2 | 7.2 | |
| | HCMC-CONF-3 | 0 to 0.5 | 6/7/2018 | 8.5 | 12 | |
| | HCMC-CONF-4 | 0 to 0.5 | 6/7/2018 | 21 | 31 | |
| | HCMC-CONF-5 | 0 to 0.5 | 3/28/2019 | 12 U | 6.0 U | |
| | HCMC-CONF-6 | 0 to 0.5 | 3/28/2019 | 12 U | 5.8 U | |
| | HCMC-CONF-7 | 0 to 0.5 | 3/28/2019 | 17 | 24 | |
| | HCMC-CONF-8 | 0 to 0.5 | 3/28/2019 | 15 | 21 | |
| | HCMC-CONF-9 | 0 to 0.5 | 3/28/2019 | 23 | 32 | |
| | HCMC-CONF-10 | 0 to 0.5 | 3/28/2019 | 25 | 55 | |
| | HCMC-CONF-6B | 0.5 to 1 | 3/28/2019 | 12 U | 5.8 U | |
| | HCMC-CONF-10B | 0.5 to 1 | 3/28/2019 | 35 | 82 | |
| MTCA Method A ULU Cleanup Level | | | | 20 | 250 | |

Values in **bold** represent concentrations above the MTCA Method A cleanup levels.

Values in **bold red** represent concentrations twice the cleanup levels.

U – Analyte was not detected at or greater than the reporting limit.

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Enclosure F

Environmental Covenant

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202202020338

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Pierce County, WA PPRICE
02/02/2022 12:00 PM

Pages: 32 Fee: \$234.50

After Recording Return
Original Signed Covenant to
Eva Barber
SWRO Toxics Cleanup Program
Department of Ecology
PO Box 47775
Olympia, Washington 98504-7775

Environmental Covenant

| | |
|--|--|
| Grantor: | <u>Franke Tobey Jones, a Washington Nonprofit Corporation</u> |
| Grantee: | <u>State of Washington, Department of Ecology</u> |
| Legal Description (abbreviated): | <u>Lts 1-37, Blk 7 & Lts 1-29, Blk 8, Replat of Point Defiance Park, in Pierce Co., WA</u> |
| <input checked="" type="checkbox"/> Complete legal on <u>EXHIBIT A</u> | |
| Assessor's Tax Parcel Identification No(s): | <u>6930000381; 6930000393; 6390000413</u> |
| Reference No. of Related Documents: | <u>N/A</u> |

I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

Dana Page

Signature of Requesting Party

Environmental Covenant

Grantor: Franke Tobey Jones, a Washington Nonprofit Corporation

Grantee: State of Washington, Department of Ecology (hereafter "Ecology")

Brief Legal Description: See Exhibit A

Tax Parcel Nos.: 6930000381, 6930000393, 6390000413

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70A.305 RCW, and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part of the site commonly known as Franke Tobey Jones Major Modification, Facility/Site No. 9163. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail. The Property is used for an assisted living, memory care, and skilled nursing facility.

c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

| Medium | Principal Contaminants Present |
|--------|--|
| Soil | Arsenic (from Tacoma Asarco Smelter Plume) |

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site.

e. In accordance with the April 14, 2017 Remedial Investigation and Cleanup Plan, two remedial areas (Remedial Areas 1 and 2) were identified. Remedial Area 1 is located within the southern portion of the site and is identified as the area where arsenic-contaminated soil was consolidated including placement of a Type 1 cap. Remedial Area 2 is located within the remainder of the Phase I construction area and consists of areas where soil was mixed with non-contaminated soil with placement of a Type 1 cap. The following is a description of the general remedial action process:

- One to 2 feet of arsenic-contaminated soil was excavated from Remedial Areas 1 and 2, stockpiled on plastic, and covered with plastic.
- Non-contaminated soil was excavated from Remedial Area 1 to a depth of 25 feet below ground surface to increase storage capacity. The non-contaminated soil was stockpiled on plastic, sampled and covered with plastic for later use as fill material on other portions of the site during construction (Stockpile 1).
- The stockpile generated from the surficial 2-feet was placed in Remedial Area 1 following excavation of the non-contaminated soil.

- A retaining wall was constructed around Remedial Area 1 to increase storage capacity.
- Approximately 4 to 6 inches of non-contaminated structural fill was placed on top of Remedial Area 2 for protection of subgrade during construction and to allow for mixing of arsenic-contaminated soil.
- Soil in Remedial Area 2 was excavated and mixed within Remedial Area 2 to meet site grades and install utilities. Soil that was deemed unsuitable for reuse for structural purposes was consolidated in Remedial Area 1. Mixed soil was stockpiled for subsequent sampling and chemical analysis to evaluate reuse as fill in Remedial Area 2 or placement in Remedial Area 1 (Stockpiles 2 through 4).
- Confirmation samples were collected for chemical analysis throughout Remedial Area 2 to document post-remedial conditions.
- A Type 1 cap was placed on top of Remedial Areas 1 and 2 consisting of hardscape or construction fencing and at least 1 foot of non-contaminated soil as shown in Exhibit C.

Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. The pertinent documents relating to the voluntary cleanup action provided at the Franke Tobey Jones Major Modification site include:

- “Remedial Investigation and Cleanup Plan”, GeoEngineers, April 14, 2017.
- “Phase I Cleanup Action Report”, GeoEngineers, May 18, 2020.
- “Opinion on the Proposed Cleanup of a Property associated with the Asarco Tacoma Smelter Site”, Department of Ecology, August 30, 2017.

f. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an “agency” under UECA, other than its’ right as a holder, are not an interest in real property.

COVENANT

Franke Tobey Jones, as Grantor and fee simple owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the GRANTOR has in the property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property. Provided, however, Ecology acknowledges that the Property is used as an independent senior living, assisted living, memory care, and skilled nursing facility and hereby waives this requirement for residency agreements at the Franke Tobey Jones facility.

e. Preservation of Reference Monuments. Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Containment of Contaminated Soil

The remedial action for the Property is based on placing a Type 1 cap on top of Remedial Areas 1 and 2 consisting of hardscape or construction fencing and at least 1 foot of non-contaminated soil as shown in Exhibit C. The primary purpose of this cap is to minimize potential for contact with arsenic-contaminated soil. As such, the following restrictions shall apply within the area illustrated in Remedial Areas 1 and 2:

Any activity in Remedial Areas 1 and 2 that will compromise the integrity of the cap below the construction fence barrier or hardscape, including: drilling; digging; planting deep-rooted or invasive plants, piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap or the retaining wall; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work within thirty (30) days of completing the repairs.

The Grantor further covenants and agrees to abide by and implement the monitoring and maintenance of the integrity of the retaining wall and the cap for perpetuity or until all contaminated soil is removed from the Property. The Cap Operation and Maintenance Plan is attached hereto as Exhibit D. This Cap Operation and Maintenance Plan includes placement of small signs in the community garden and other specified locations advising senior living residents

at the Franke Tobey Jones facility to avoid activities that could compromise the integrity of the cap as described above. For the first two years, the inspection checklist shall be submitted to Ecology and City of Tacoma twice a year. After two years, annual reporting to the City of Tacoma and Ecology are required.

Section 3. Access.

- a. The Grantor shall maintain access to remedial action components necessary to inspect, monitor and maintain the Type 1 Cap shown on Exhibit C.
- b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.
- c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

- a. **Conveyance of Any Interest.** The Grantor, when conveying any interest within the area of the Property described in Exhibit A, including but not limited to title, easement, leases, and security or other interests in the Property, must:
 - i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance of the Property. Provided, however, Ecology acknowledges that the Property is used as an independent senior living, assisted living, memory care, and skilled nursing facility and hereby waives this requirement for residency agreements at the Franke Tobey Jones facility. Waiver of this advance notice to Ecology for these transactions does not constitute waiver of this notice for the entire Property nor a waiver of the requirement in Section 4.a.ii. to include this notice in any document conveying interest in the Property.
 - ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON TO BE COMPLETED AND RECORDED WITH THE PIERCE COUNTY AUDITOR UNDER RECORDING NUMBER TO BE COMPLETED. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.
 - iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Notification procedure. Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

Judy Dunn
President & CEO
Franke Tobey Jones
5340 North Bristol Street Tacoma, WA
98407
(253) 756-6361 (direct)

Environmental Covenants Coordinator
Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47600
Olympia, WA 98504 – 7600
(360) 407-6000
ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

- i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and
- ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

c. By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

- b.** Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.
- c.** Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.
- d.** The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.
- e.** This Covenant shall be liberally construed to meet the intent of MTCA and UECA.
- f.** The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.
- g.** A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override specific requirements in that section or paragraph.

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The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this 11th day of Nov, 2021.

FRANKE TOBEY JONES, a Washington Nonprofit Corporation

By: Judy Dunn
Printed Name: Judy Dunn
Title: President & CEO

STATE OF WASHINGTON
COUNTY OF Pierce

On this 11th day of Nov, 2021, I certify that Judy Dunn personally appeared before me, acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument, and acknowledged it as the Managing Member of Franke Tobey Jones, a Washington Nonprofit Corporation, to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.



Linda Tonjann
Notary Public in and for the State of Washington
Residing at Tacoma wa
My appointment expires 11-01-23

The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
Department of Ecology

By: Rebecca S. Lawson
(signature)

Printed Name: REBECCA S. LAWSON

Title: SECTION MANAGER

Dated: 12/6/2021

STATE ACKNOWLEDGMENT

STATE OF Washington
COUNTY OF Thurston

On this 6th day of December, 2021, I certify that Rebecca S. Lawson personally appeared before me, acknowledged that he/she is the section manager of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument for said state agency.



Treasure A Mitchell
Notary Public in and for the State of Washington

Residing at McClary, WA

My appointment expires 8/2/2023

Exhibit A

LEGAL DESCRIPTION

Parcel 1:

Lots 1, 2, 5 and 6, Block 7, Replat of Point Defiance Park Addition to Tacoma, Washington, according to the Plat thereof recorded in Volume 10 of Plat, Page 78, records of Pierce County, Washington;

Together with that portion of vacated alley abutting Lots 5 and 6, vacated by Ordinance No. 27115 of the City of Tacoma, recorded under recording No. 200311130400.

Parcel 2:

Lots 3 and 4, Block 7, Replat of Point Defiance Park Addition to Tacoma, Washington, according to the Plat thereof recorded in Volume 10 of Plat, Page 78, records of Pierce County, Washington;

Together with that portion of vacated alley abutting Lot 4 and that portion of vacated North Park Avenue abutting Lots 3 and 4, vacated by Ordinance No. 27115 of the City of Tacoma, recorded under recording No. 200311130400.

Parcel 3:

Lots 7 through 37, inclusive, Block 7, and Lots 1 through 29, inclusive, Block 8 Replat of Point Defiance Park Addition to Tacoma, Washington, according to the Plat thereof recorded in Volume 10 of Plat, Page 78, records of Pierce County, Washington;

Together with that portion of vacated Vassault Street extending from the South boundary of North Park Avenue to the North Boundary of Park Way, according to the Replat of Point Defiance Park Addition to Tacoma, Washington, according to the Plat thereof recorded in Volume 10 of Plat, Page 78, pursuant to Ordinance No. 13681, recorded under recording No. 1527011;

Also together with that portion of vacated alley between Blocks 7 and 8 from its intersection with Vassault Street to the North line of Lot 9, Block 7, of said Plat, pursuant to Ordinance No. 8070, recorded under recording No. 698176;

Also together with that portion of vacated alley lying between and abutting Lots 7 and 8, Blocks 7 and 8 of said Plat, pursuant to Ordinance No. 25101, recorded under recording No. 9206160214;

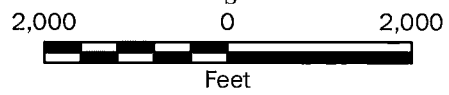
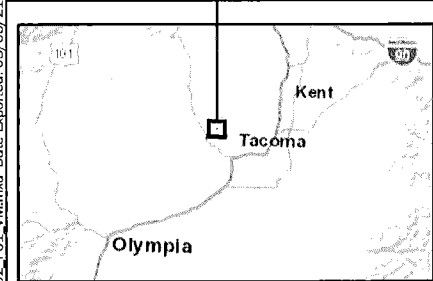
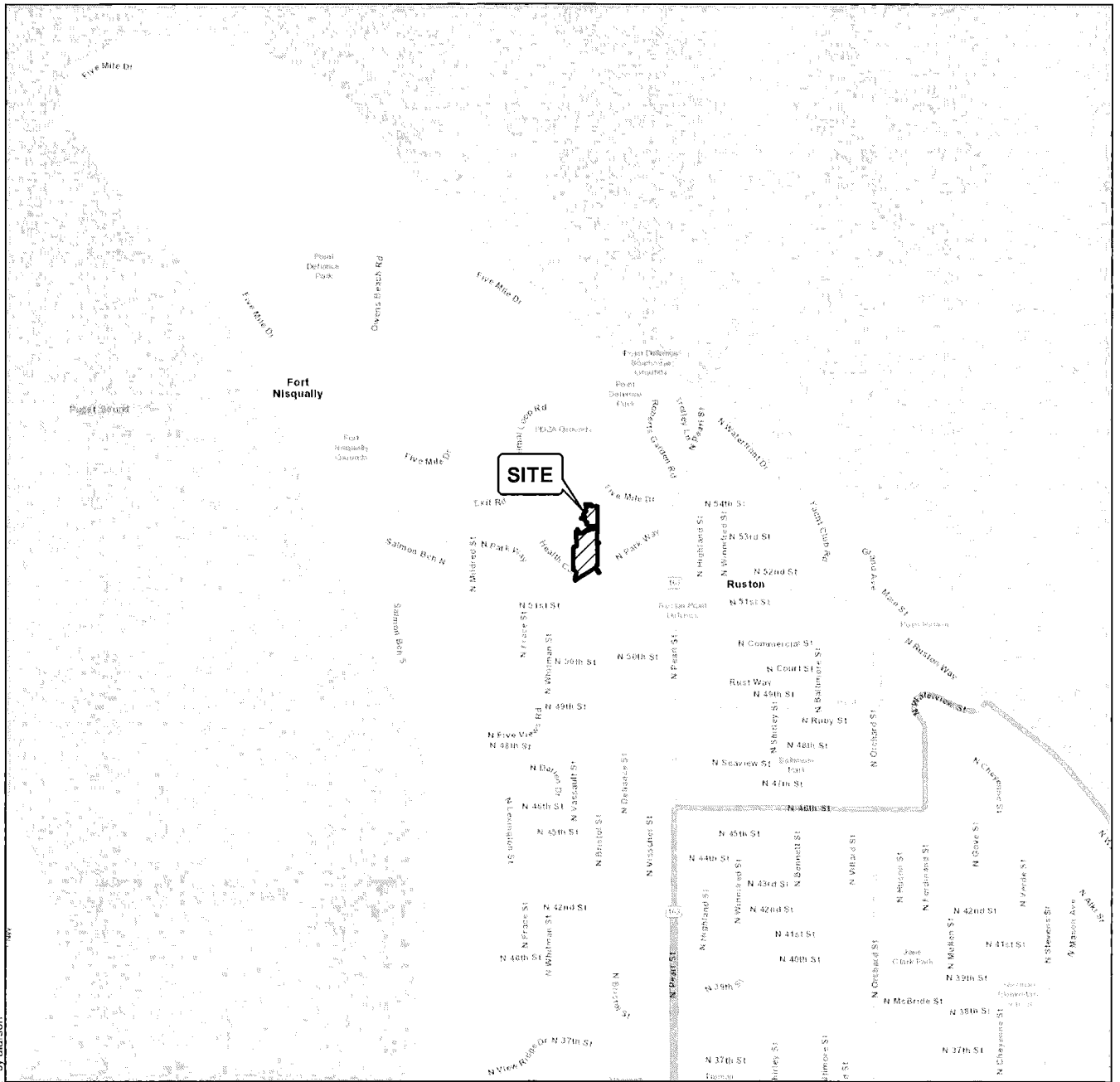
Together with that portion of vacated alley abutting Lots 1, 5 and 6, Block 8 and that portion of vacated North Park Avenue abutting Lots 1 through 4, Block 8, vacated by Ordinance No. 27115 of the City of Tacoma, recorded under recording No. 200311130400.

Situate in the County of Pierce, State of Washington.

Tax Parcel No.: 693000-038-1, 693000-039-3, and 693000-041-3

Exhibit B

PROPERTY MAP



Vicinity Map

Franke Tobey Jones
Tacoma, Washington



Exhibit B

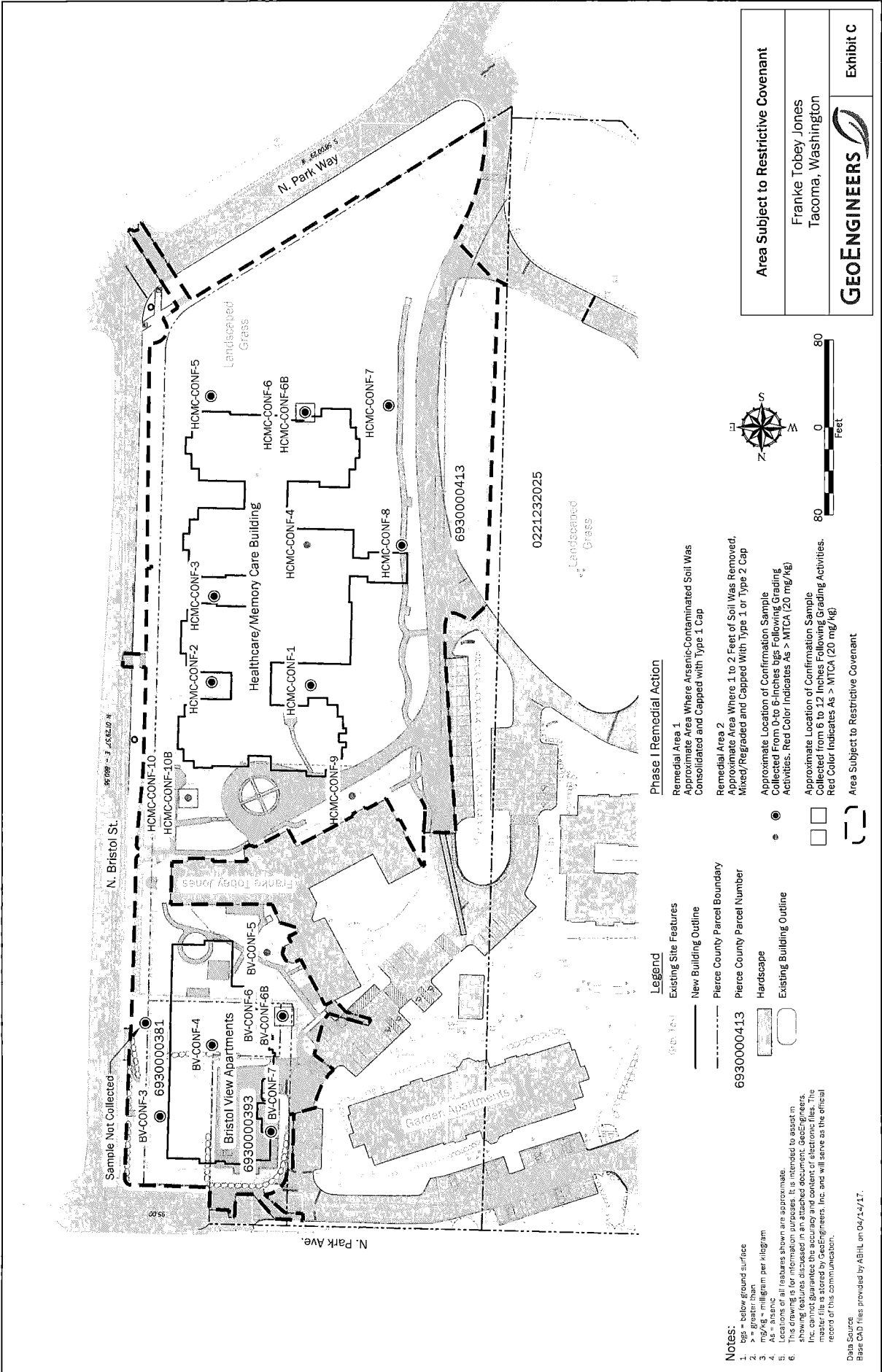
Notes:
 1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016
 Projection: NAD 1983 UTM Zone 10N

P:\10_10068002\GIS\MXDs\10068002_F01_VM.mxd Date Exported: 08/05/21 by alarson

Exhibit C

MAP ILLUSTRATING LOCATION OF CAP IN REMEDIAL AREAS 1 AND 2



NOTES:

1. bgs = below ground surface
2. > = greater than
3. mg/kg = milligram per kilogram
4. Locations of all features shown are approximate.
5. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
6. Data Source: Base CAD files provided by ABHL on 04/14/17.

Legend

- Existing Site Features
- New Building Outline
- Pierce County Parcel Boundary
- Pierce County Parcel Number
- Hardscape
- Existing Building Outline

Phase I Remedial Action

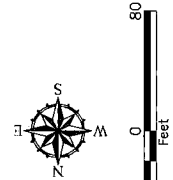
Remedial Area 1
Approximate Area Where Arsenic-Contaminated Soil Was Consolidated and Capped with Type 1 Cap

Remedial Area 2
Approximate Area Where 1 to 2 Feet of Soil Was Removed, Mixed/Regraded and Capped With Type 1 or Type 2 Cap

Approximate Location of Confirmation Sample Collected From 0 to 6 inches bgs Following Grading Activities. Red Color Indicates AS > MTCAL (20 mg/kg)

Approximate Location of Confirmation Sample Collected from 6 to 12 inches Following Grading Activities. Red Color Indicates AS > MTCAL (20 mg/kg)

Area Subject to Restrictive Covenant



| | |
|--|--|
| Area Subject to Restrictive Covenant | |
| Franke Tobey Jones Tacoma, Washington | |
| | |
| Exhibit C | |

Exhibit D

CAP OPERATION AND MAINTENANCE PLAN

**Cap Operation and Maintenance Plan
Exhibit D to Environmental Restrictive
Covenant**

Franke Tobey Jones
Master Plan Phase I
Tacoma, Washington

for
Franke Tobey Jones

August 4, 2021



**Cap Operation and Maintenance Plan
Exhibit D to Environmental Restrictive
Covenant**

Franke Tobey Jones
Master Plan Phase I
Tacoma, Washington

for
Franke Tobey Jones

August 4, 2021

GEOENGINEERS 

1101 South Fawcett Avenue, Suite 200
Tacoma, Washington 98402
253.383.4940

**Cap Operation and Maintenance Plan
Exhibit D to Environmental Restrictive
Covenant**

**Franke Tobey Jones
Master Plan Phase I
Tacoma, Washington**

Project No. 10068-002-02

August 4, 2021

Prepared for:

Franke Tobey Jones
5340 North Bristol Street
Tacoma, Washington 98407

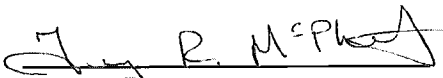
Attention: Judy Dunn

Prepared by:

GeoEngineers, Inc.
1101 South Fawcett Avenue, Suite 200
Tacoma, Washington 98402
253.383.4940



Tricia S. DeOme, LG
Senior Geologist



Terry R. McPhetridge, LG, LHG
Associate

AMW:TSD:TRM:ch

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Table of Contents

| | |
|--|----------|
| 1.0 INTRODUCTION | 1 |
| 1.1. Purpose | 1 |
| 2.0 BACKGROUND..... | 1 |
| 2.1. FTJ Facility History and Current Use | 1 |
| 2.2. FTJ Redevelopment | 2 |
| 2.3. Contaminants of Potential Concern..... | 2 |
| 2.4. Summary of Remedial Activities | 2 |
| 3.0 SIGNAGE..... | 3 |
| 4.0 EXCAVATION PROTOCOLS..... | 3 |
| 4.1. Qualified Personnel..... | 3 |
| 4.2. Personal Protective Equipment..... | 3 |
| 5.0 SOIL MANAGEMENT | 4 |
| 5.1. Soil Handling and Disposal | 4 |
| 5.1.1. Soil Storage..... | 4 |
| 5.1.2. Soil Transportation | 5 |
| 5.1.3. Confirmation Sampling | 5 |
| 6.0 ANNUAL INSPECTION | 5 |
| 6.1. Baseline Inspection | 5 |
| 6.2. Annual Signage and Cap Inspection and Maintenance | 5 |
| 7.0 CAP RESTORATION | 6 |
| 8.0 NOTIFICATION AND REPORTING..... | 6 |
| 9.0 RECORDKEEPING | 7 |
| 10.0 REFERENCES | 7 |

LIST OF FIGURES

Figure 1. Vicinity Map

Figure 2. Area Subject to Restrictive Covenant

APPENDIX

Appendix A. Protective Inspection and Maintenance Compliance Checklist

1.0 INTRODUCTION

This Operation and Maintenance Plan (O&M Plan) has been prepared for use by the property owner of the Franke Tobey Jones (FTJ) Facility under an Environmental Restrictive Covenant (hereafter "Covenant") that was established under the condition that residual contamination remains on the Property following completion of the remedial actions during the Phase I Facility expansion. Remedial actions included placement of Type 1 and Type 2 Soil caps covering said residual contamination.

The FTJ facility is used as an independent senior living, assisted living, memory care, and skilled nursing facility located at 5340 North Bristol Street, in Tacoma, Washington (Pierce County parcel nos. 6390000413, 0221232025, 6930000393 and 6930000381). The FTJ facility location is shown in Figure 1, Vicinity Map. The FTJ facility layout including new Phase I buildings and the locations of the remedial areas are shown in Figure 2, Area Subject to Restrictive Covenant.

The FTJ facility is located within the Asarco Tacoma Smelter Plume (TSP) boundary known to contain arsenic- and lead-contaminated soil from air fallout related to Asarco's historic operations in nearby Ruston, Washington. The nature and extent of arsenic- and lead-contaminated soil are summarized in the Remedial Investigation and Cleanup Action Plan (CAP) (GeoEngineers 2017). Remedial actions were performed during Phase I construction activities to address the arsenic- and lead-contaminated soil. The remedial actions are summarized in the Phase I Cleanup Action Report (GeoEngineers 2020). Residual contamination consists of arsenic-contaminated soil at the FTJ facility.

The Type 1 Soil Cap and Type 2 Hard Cap were installed in general accordance with the Washington State Department of Ecology (Ecology) approved CAP and the Ecology TSP Model Remedies Guidance (TSPMRG) document dated July 2019.

1.1. Purpose

The purpose of this Cap O&M Plan is to provide a general summary of the methods for proper soil management to be utilized within the Type 1 Soil Cap and Type 2 Hard Cap areas and to outline precautions, procedures, and maintenance requirements to protect human health and the environment from hazardous substances.

This Cap O&M Plan becomes effective upon approval by Ecology. FTJ will be responsible for implementation of this plan. Any substantive changes to this Cap O&M Plan must be approved by Ecology.

2.0 BACKGROUND

2.1. FTJ Facility History and Current Use

The facility was originally developed in 1924 with a residential building (Franke Tobey Jones) located on the eastern portion of the property. An additional 14 residential buildings and support structures were constructed within the complex over the next 80 years.

Soil has been graded and moved around at the FTJ facility during each development stage to fill in areas that currently contain grass particularly on the eastern and the southern portions of the FTJ facility. The

redistribution of fill on the site has buried the arsenic- and lead-contaminated soil present on site deeper (up to 11 feet below ground surface [bgs] in areas) than typically encountered within the TSP (up to 18 inches bgs).

2.2. FTJ Redevelopment

FTJ is expanding their facility in two separate phases. Phase I was implemented between 2017 and 2019. Phase II will be implemented in the future. Components of each phase are discussed further below based on our understanding at the time of this report.

The Phase I expansion consisted of the following:

- A new health care and memory care (HCMC) building was constructed along the eastern edge of the property. The lower level of the HCMC building daylights to the east and is about 8 to 12 feet below grade on the west.
- A new apartment building (Bristol View Apartments) was constructed within the northeast corner of the property. The lower level of the Bristol View Apartments daylights to the north and is up to about 15 feet below grade on the south.
- A new cottage duplex was constructed along the western portion of the property.
- Other site improvements included retaining walls, infiltration vaults, underground utilities, and pavement areas.

Phase II expansion will occur on Pierce County parcel nos. 6390000413 and 0221232025 in the future with anticipated construction activities as follows:

- An independent living and assisted living (IL/AL) facility expansion that will be connected to the north side of the existing Lillian Pratt building. The northern portion of the existing Lillian Pratt building will be demolished to allow for the IL/AL expansion. The IL/AL expansion will include an additional at-grade parking lot.
- Other site improvements include retaining walls, underground utilities, and pavement areas.

2.3. Contaminants of Potential Concern

The contaminant of potential concern (COPC) for soil is arsenic.

2.4. Summary of Remedial Activities

Arsenic-contaminated soil was divided into two remedial areas (Remedial Areas 1 and 2) as identified in the CAP developed prior to Phase I construction activities (Figure 2). Remedial Area 1 is located within the southern portion of the site where arsenic-contaminated soil was consolidated, including placement of a Type 1 Soil Cap. Remedial Area 2 is located within the remainder of the Phase I construction areas that consists of a combination of areas where soil was mixed with non-contaminated soil with placement of a Type 1 Soil Cap and construction of Type 2 Hard Cap that consists of buildings and paved surfaces. The description of the general remedial action process is provided in the Phase I Cleanup Action Report (GeoEngineers 2020).

Arsenic was detected at concentrations greater than the TSP Remediation Levels in soil that was consolidated and capped within Remedial Area 1. TSP remediation levels are defined as the average arsenic in soil less than 20 milligram per kilogram (mg/kg) with no single sample greater than 40 mg/kg. Arsenic was also detected at concentrations greater than 20 mg/kg in confirmation soil samples collected at five locations within Remedial Area 2 following grading activities. One of the locations resides under the HCMC Building (Type 2 Hard Cap) and the other four locations reside under landscaped areas (Type 1 Soil Cap). The locations of the confirmation soil samples are presented in Figure 2.

The Type 1 Soil Cap consists of construction fence placed directly onto the arsenic-contaminated/potentially contaminated soil subgrade, overlain by at least 12 inches of non-contaminated soil and landscape materials (e.g., sod, mulch, vegetation, gravel, etc.). The Type 2 Hard Cap consists of asphalt roadways, concrete walkways, and the new Phase I buildings listed above.

3.0 SIGNAGE

This plan includes placement of small signs in the community garden and other locations to effectively advise senior living residents and staff at the Franke Tobey Jones facility to avoid activities that could compromise the integrity of the cap as described above.

4.0 EXCAVATION PROTOCOLS

The excavation protocols outlined in this section will be followed if activities are necessary that would require penetration or disruption of the Type I Soil Cap located in Remedial Areas 1 and 2, including drilling or excavation activities. Ecology will be notified of penetration below the construction fence barrier or hardscape.

4.1. Qualified Personnel

All activities in which workers may come into direct contact with contaminated soil must be conducted by qualified personnel. Qualified workers must have completed 40 hours of initial Occupational Safety and Health Administration (OSHA)-approved training before commencing work and have 3 days of actual field experience under a trained, experienced supervisor as required by Federal OSHA Regulations (Standard 1910.120 and 1926.65).

Each worker must be familiar with the site-specific health and safety plan which shall be designed to identify, evaluate, and control safety and health hazards and provide protocol for emergency response. It is the responsibility of the Contractor to provide a site-specific health and safety plan (HASP) in accordance with all local, state, and federal requirements. The HASP should address site-specific activities (excavation, trenching, heavy equipment, etc.) as well as potential contaminants that may be encountered. Field activities should be completed in accordance with all OSHA regulations for worker safety, including 29 CFR 1910.120.

4.2. Personal Protective Equipment

Soil containing the COPC arsenic may be encountered when drilling or excavating within Remedial Areas 1 and 2. It is anticipated that a combination of engineering controls and personal protective equipment (PPE) will reduce the risk of exposure to any COPCs. FTJ or their representatives will coordinate with the Contractor

to establish site-specific health and safety protocols and emergency procedures and appropriate PPE for the corresponding activity. FTJ or their representatives will be on-site during all cap disturbing activities, as necessary.

Workers performing general construction or excavation activities within Remedial Areas 1 and 2 where skin contact with the COPC is not likely will wear a hard hat, steel-toed (leather or chemical resistant) work boots, safety glasses with side shields, and nitrile gloves. Half or full-face respirators may be additionally required when performing activities in which inhalation or incidental ingestion of soil dust is of concern as well as chemical resistant work boots, and Tyvek coveralls (Modified Level C PPE). Workers drilling, excavating, or otherwise conducting activities where skin contact with the COPC is possible may also be required to wear Modified Level C PPE. Hearing protection and hard hats and other equipment to protect against physical risks will be employed as appropriate to the task.

5.0 SOIL MANAGEMENT

All soil excavated from Remedial Areas 1 and 2 should be assumed to contain COPC arsenic above acceptable risk levels unless sampling and analysis demonstrates otherwise. The soil must be managed consistently using one of the following methods:

1. Movement of impacted soils from within Remedial Areas 1 and 2 does not constitute generation of waste. Consequently, excavated soil from one location may be used as backfill in another select location provided that the excavated soil is covered by a restored cap meeting the requirements described in this Plan. However, the area soil can be moved to is limited and only applies to the area outlined in Figure 2. No sampling or chemical analysis is required for soil management under this scenario. Therefore, this option may have limited applicability at the site.
2. Off-site Disposal. All soil excavated from Remedial Areas 1 and 2 will be disposed off site at an authorized disposal facility following the procedures outlined in Sections 5.1 and 5.2, Potentially Characteristic Wastes.

It does not appear that on-site soils would be considered hazardous waste based on the analytical results of the sampling performed during the investigations and remedial actions on the property. In addition, soil within Remedial Areas 1 and 2 would not be expected to exhibit the characteristic of ignitability, corrosivity, reactivity, or toxicity.

5.1. Soil Handling and Disposal

It is anticipated that all excavated soil will be directly loaded onto trucks for transport and disposal. However, stockpiling of soil or placement into appropriate containers (e.g., covered roll-off boxes) is allowed under this Plan. Each container will be properly labeled to indicate the point of generation, contents, and date. All soil from Remedial Areas 1 and 2 will be required to be disposed at a Subtitle D landfill. An approved landfill facility and waste disposal authorization must be obtained prior to initiating any work activities.

5.1.1. Soil Storage

Soil storage is anticipated to be minimal with excavated soil likely directly loaded into trucks. However, temporary soil stockpiles, if used, will require management in a manner that minimizes stormwater runoff,

dust, and worker contact. Stockpiled soil should be placed on and covered with 10-mil plastic sheeting (or similar) and bermed to prevent storm water runoff, direct contact, and dust generation. The sheeting shall be placed in a manner to not allow precipitation to collect and anchored with sand bags. The plastic sheeting and berm should be inspected weekly to ensure it remains functional to meet the requirements identified above.

Drop boxes will be lined with a plastic insert liner or other method and covered nightly. Temporary soil stockpiles and/or drop boxes of contaminated soil shall be disposed off-site within 90 days, unless written approval is obtained from Ecology for an alternative schedule. The area beneath the underlying plastic sheeting shall be inspected following the stockpile removal and any remaining stockpile soil scraped, swept, or otherwise removed and properly disposed.

5.1.2. Soil Transportation

A waste disposal authorization will be obtained prior to any material being transported off site. The waste disposal authorization form will be prepared for each waste stream and provided to the determined off-site Subtitle D landfill disposal facility. All trucks carrying contaminated soil shall be lined and covered during transport. All measures will be followed to ensure that tracking of material off-site does not occur.

5.1.3. Confirmation Sampling

Contaminated soil is generally accepted to be present under the Type 1 Soil Cap and the Type 2 Hard Cap. No additional confirmation sampling is necessary nor will be conducted because the site has been capped and this plan requires the cap to be restored to existing Cap conditions following any excavation activities.

6.0 ANNUAL INSPECTION

6.1. Baseline Inspection

FTJ will conduct an initial baseline inspection of the Type 1 Soil Caps and Type 2 Hard Caps following approval of this Cap O&M Plan. All surface completions installed during the Phase I remedial activities will be identified and inspected for quality of installation establishment. These inspections will include lawn areas, planter beds, all paved surfaces and retaining features installed within Remedial Areas 1 and 2.

6.2. Annual Signage and Cap Inspection and Maintenance

Continued cap and signage maintenance will consist of annual inspections as outlined below. FTJ or their designated agents shall inspect the Type 1 Soil Caps and Type 2 Hard Caps within Remedial Areas 1 and 2 one time per year to identify any deterioration of the cap that requires maintenance. A Protective Inspection and Maintenance Compliance Checklist included in Appendix A shall be completed with every inspection. The inspection shall regard the following conditions as deterioration requiring maintenance:

1. **Lawn Areas.** Bare soil areas observed to exceed 3 square feet within the Type 1 Soil Cap areas shall be replenished with non-contaminated topsoil and re-seeded or sodded. The new seed or sod shall receive extra care until the grass has reestablished and the bare soil is no longer exposed.
2. **Landscape Areas.** Bare soil observed to exceed 3 square feet within the Type 1 Soil Cap areas shall be replenished with mulch consistent with the types used on the FTJ facility. These may include wood chips, bark mulch, compost, sand or gravel.

3. **Asphalt.** Cracks, alligatored areas (areas with numerous intersecting cracks), and buckling shall be regarded as deterioration requiring maintenance. Cracks shall be patched using tar or asphalt material designed for that purpose or by sealing with appropriate crack repair material. Alligatored areas larger than 500 square feet shall be removed and replaced with a minimum of 3 inches of new asphalt. Smaller alligatored areas may be repaired as cracks. Buckled asphalt shall be removed if it is accompanied with cracks and replaced with a minimum of 3 inches of new asphalt.
4. **Concrete.** Cracks with an average width of 1 inch or more shall be regarded as deterioration requiring maintenance. Such cracks shall be repaired with caulk, grout or a concrete patch material. Deteriorated concrete shall be replaced with a minimum of three inches of new concrete if such repairs are impractical.
5. **Retaining Features.** Retaining walls installed to contain capped arsenic-contaminated soil shall be inspected for visible differential settlement such as slumping or leaning that may failure of the retaining feature.

7.0 CAP RESTORATION

The existing caps (Type 1 Soil Cap and Type 2 Hard Cap) are considered sufficient to isolate the contaminated soil from direct contact with the public and residents of the FTJ facility. However, activities that are conducted that penetrate or otherwise disturb the caps (as described in Section 4) must be restored properly. Minimum requirements for cap restoration are provided below:

1. Areas where Type 1 Soil Caps are temporarily removed, damaged or otherwise altered shall be restored with new non-contaminated soil and returning the soil cap to a minimum thickness of 12 inches. The surface of the soil cap shall be covered with a stabilizing material such as sod, mulch or other vegetation that will prevent access to the soil and control stormwater runoff and/or soil erosion.
2. Areas where the asphalt or concrete Type 2 Hard Cap is temporarily removed shall be covered with a new cap consisting of a minimum of 3 inches of new pavement and installed in a manner consistent with the original pavement design specified in the Phase I Expansion Plans and Specifications.
3. The cap must be restored similar to or of greater quality than the existing surface and be constructed such that it prevents contact with impacted soil, minimizes exposure of COPCs to stormwater, and prevents erosion of impacted soil.
4. For minor penetrations of the cap, such as borings through the cap, the penetration shall be immediately repaired in the manner described above under Cap Maintenance.

8.0 NOTIFICATION AND REPORTING

FTJ will notify Ecology prior to any project that will compromise the integrity of the cap below the construction fence barrier or hardscape in Remedial Areas 1 and 2 (as depicted in Figure 2) at least 60 days prior to starting the activity. The notification will include a general description of the activity, the location of the activity, the project schedule, and the approximate volumes of contaminated soil anticipated to be managed. The notification will also describe the intended disposition of any excavated soil (i.e., whether it will be managed on site or transported off site). The management of contaminated soil will be documented

in a report submitted to Ecology within 90 days following completion of each project involving soil disturbance. The report will include the following:

- A description of the activities that resulted in management of contaminated soil including excavation locations.
- Estimated quantities of contaminated soil removed and managed.
- Results of any soil sampling and analysis.
- Volumes and locations of soil managed offsite and bills of lading and/or waste manifests.
- Photographic documentation to show the location of the disturbed area and adequate cap restoration.

9.0 RECORDKEEPING

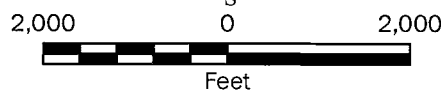
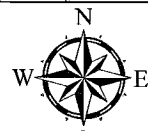
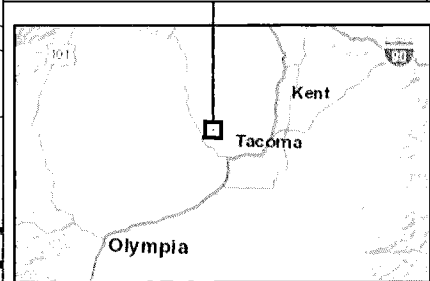
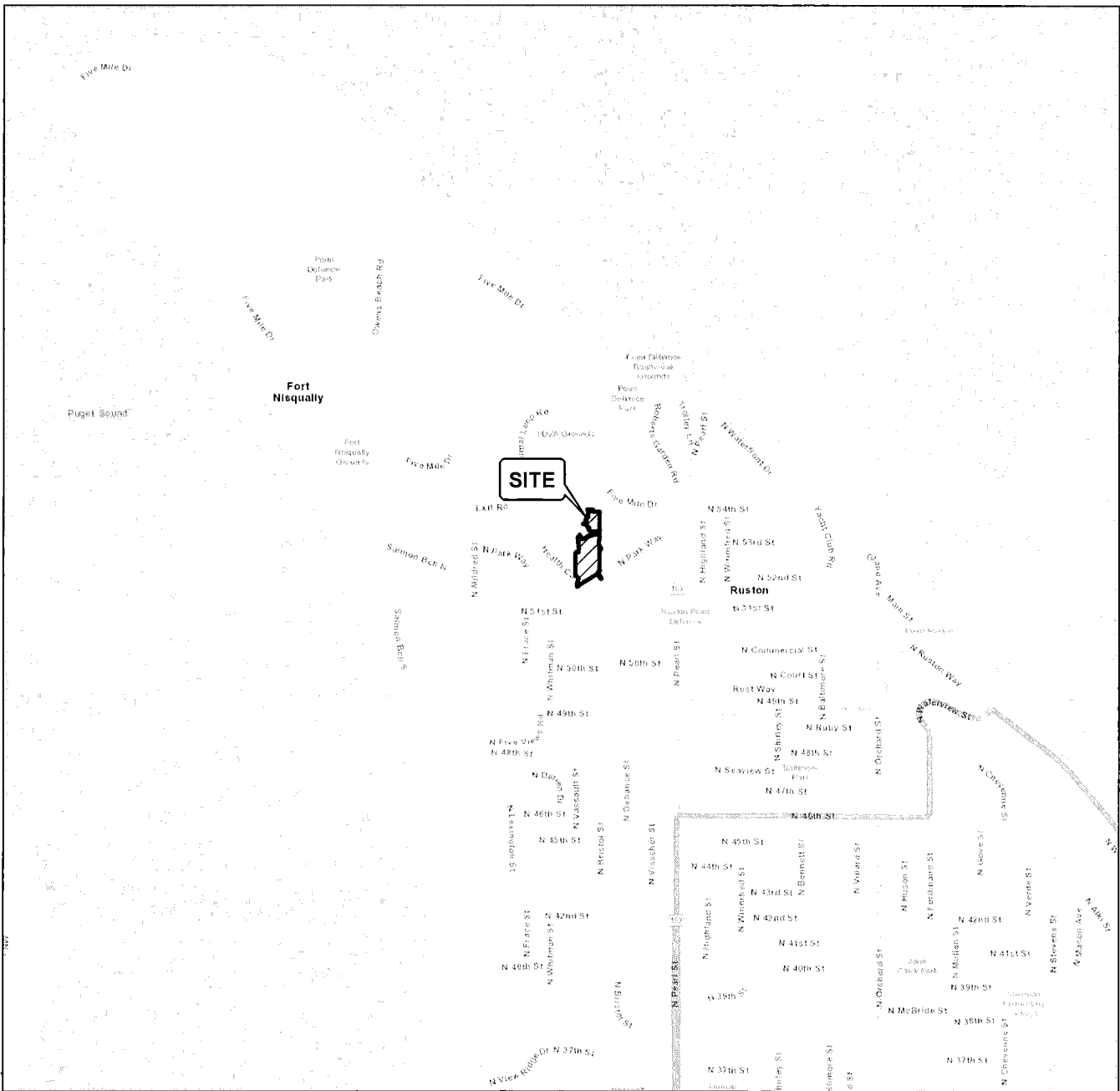
FTJ shall maintain records documenting: (1) the annual inspections described in Section 6, including any observations of cap deterioration; (2) cap restoration and maintenance activities; (3) disposition of excavated soil placed on site, including identification of the areas and estimated volumes of excavated soil that has been placed; and (4) off-site disposal of excavated soil, including waste characterization, waste manifests and disposal certificates. Such documentation shall be maintained in the permanent records for the property, provided to Ecology upon request, and disclosed to any subsequent property owner(s).

10.0 REFERENCES

GeoEngineers, Inc. 2017. Remedial Investigation and Cleanup Plan, Franke Tobey Jones – Master Plan Phase I & II, Tacoma, Washington, April 14, 2017.

GeoEngineers, Inc. 2020. Phase I Cleanup Action Report, Franke Tobey Jones – Master Plan Phase I, Tacoma, Washington, May 18, 2020.

Washington State Department of Ecology, 2019. “2019 Tacoma Smelter Plume Model Remedies Guidance, Sampling and Guidance of Arsenic and Lead Contaminated Soils for: Formal Cleanup Sites, Voluntary Cleanup Program, Properties Under Development.” Ecology Toxics Cleanup Program. July 2019.



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 10N

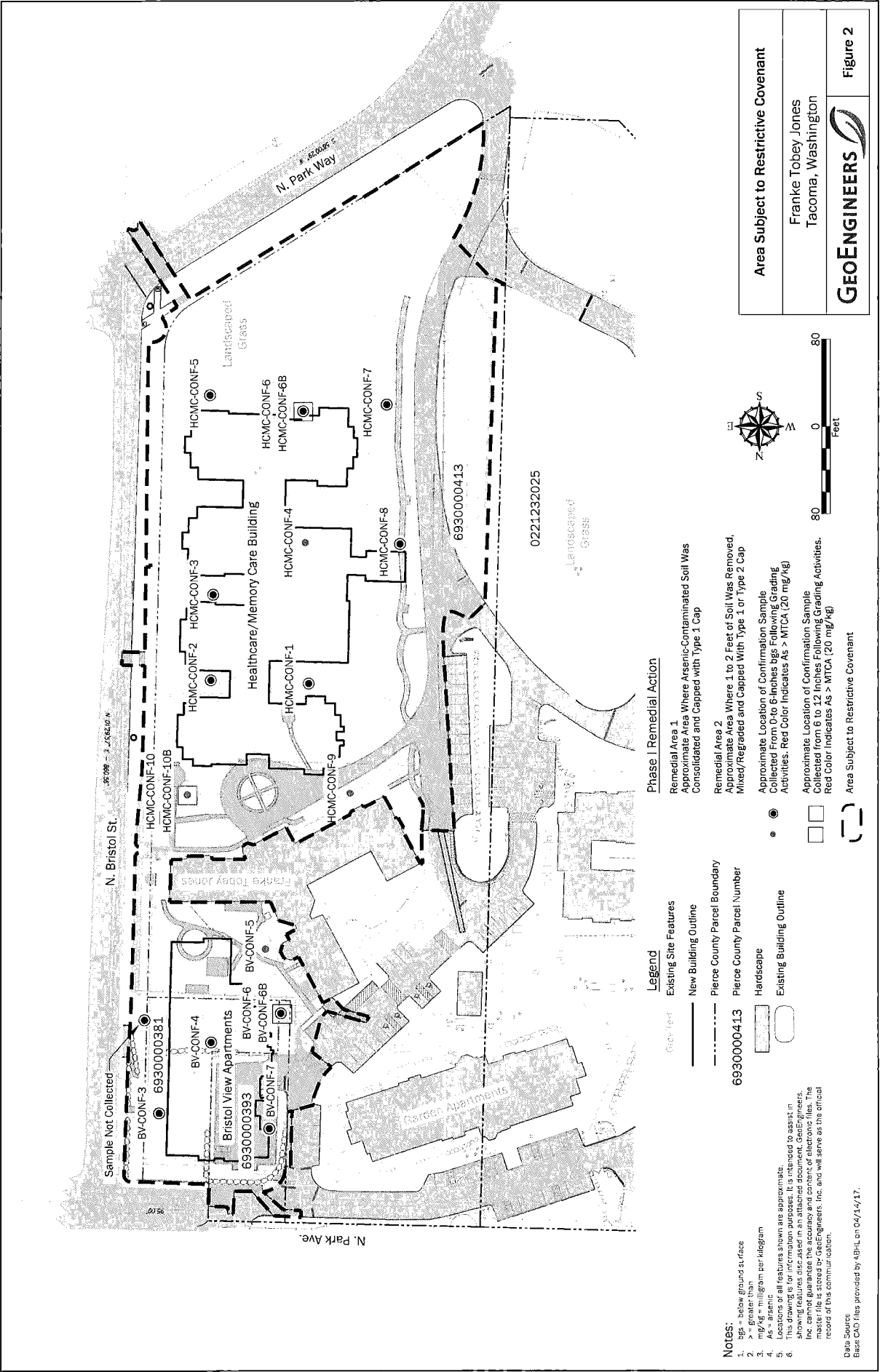
Vicinity Map

Franke Tobey Jones
Tacoma, Washington



Figure 1

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| | |
|---|--|
| Area Subject to Restrictive Covenant | |
| Franke Tobey Jones Tacoma, Washington | |
| GEOENGINEERS | |
| Figure 2 | |

Phase I Remedial Action

- Remedial Area 1**
Approximate Area Where Arsenic-Contaminated Soil Was Consolidated and Capped With Type 1 Cap
- Remedial Area 2**
Approximate Area Where 1 to 2 Feet of Soil Was Removed, Mixed/Regraded and Capped With Type 1 or Type 2 Cap
- Approximate Location of Confirmation Sample Collected From 0 to 6-Inches Tgs Following Grading Activities. Red Color Indicates As > MTCA (20 mg/kg)
- Approximate Location of Confirmation Sample Collected from 6 to 12 Inches Following Grading Activities. Red Color Indicates As > MTCA (20 mg/kg)

Legend

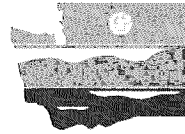
- Grey Level Existing Site Features
- New Building Outline
- Pierce County Parcel Boundary
- Pierce County Parcel Number
- Hardscape
- Existing Building Outline

Notes:

1. bgs = below ground surface
2. > = greater than
3. Tgs = top of ground per flag/dug
4. As = Arsenic
5. Locations of all features shown are approximate. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and contents of electronic files. The record of this stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:
Base CAD files provided by 48H-Lon 04/14/17.

APPENDIX A
Protective Inspection and Maintenance Compliance Checklist



Annual Monitoring Inspection

Property Name: Frank Tobey Jones Phase I
 Property Address: 5340 North Bristol St, Tacoma, Washington
 Facility Site ID: 9163
 VCP number: SW1592

PROTECTIVE INSPECTION AND MAINTENANCE COMPLIANCE CHECKLIST

Exhibit D to Restrictive Covenant

INSPECTION DETAILS

| | | |
|--------------------------|------------------|--------------------|
| INSPECTION DATE AND TIME | INSPECTOR'S NAME | WEATHER CONDITIONS |
|--------------------------|------------------|--------------------|

INSPECTION OF DIRT ALERT SIGNS

| | YES | NO | IF NO, DESCRIBE CONDITION AND SUBMIT PHOTOS WITH DATES |
|-----------------------------------|--------------------------|--------------------------|--|
| Signs Readable | <input type="checkbox"/> | <input type="checkbox"/> | |
| Signs Visible | <input type="checkbox"/> | <input type="checkbox"/> | |
| Description of Corrective Action: | | | |

CAP OF CONTAMINATED SOIL CELL

| | YES | NO | IF YES, DESCRIBE CONDITIONS AND SUBMIT PHOTOS WITH DATES |
|---|--------------------------|--------------------------|--|
| Cracks | <input type="checkbox"/> | <input type="checkbox"/> | |
| Buckling | <input type="checkbox"/> | <input type="checkbox"/> | |
| New deep-rooted plants present | <input type="checkbox"/> | <input type="checkbox"/> | |
| Water seepage | <input type="checkbox"/> | <input type="checkbox"/> | |
| Disturbance to clean soil layer above orange construction fence barrier | <input type="checkbox"/> | <input type="checkbox"/> | |
| Description of Corrective Action | | | |

EDUCATION OF RESIDENTS

| | YES | NO | N/A |
|--|--------------------------|--------------------------|--------------------------|
| Publicly available information about the TSP contamination | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other education efforts about the TSP | | | |

OTHER COMMENTS AND RECOMMENDATIONS

CONCLUSIONS

The above information accurately represents what I observed during my inspection of the Property

SIGNATURE

DATE

-
- ⇒ Complete semiannual inspections for two years, annual inspections from then on.
 - ⇒ Submit inspection sheets and photos to Ecology and City of Tacoma.
 - ⇒ The monitoring continues on the Property until all contaminated soil is removed from the Property. This requirement runs with the Property, even when the Property changes ownership.
 - ⇒ Please, submit reports to the following individuals:

SIGNED HARD & ELECTRONIC COPY (USPS OR FAX) TO:

Eva Barber
Department of Ecology
Toxics Cleanup Program
P.O. Box 47775
Olympia, WA 98504-7775
eva.barber@ecy.wa.gov

SIGNED ELECTRONIC COPY (PDF) TO:

Shanta Frantz
City of Tacoma
Planning and Development Services
747 Market Street
Tacoma, WA 98402
sfrantz@cityoftacoma.org